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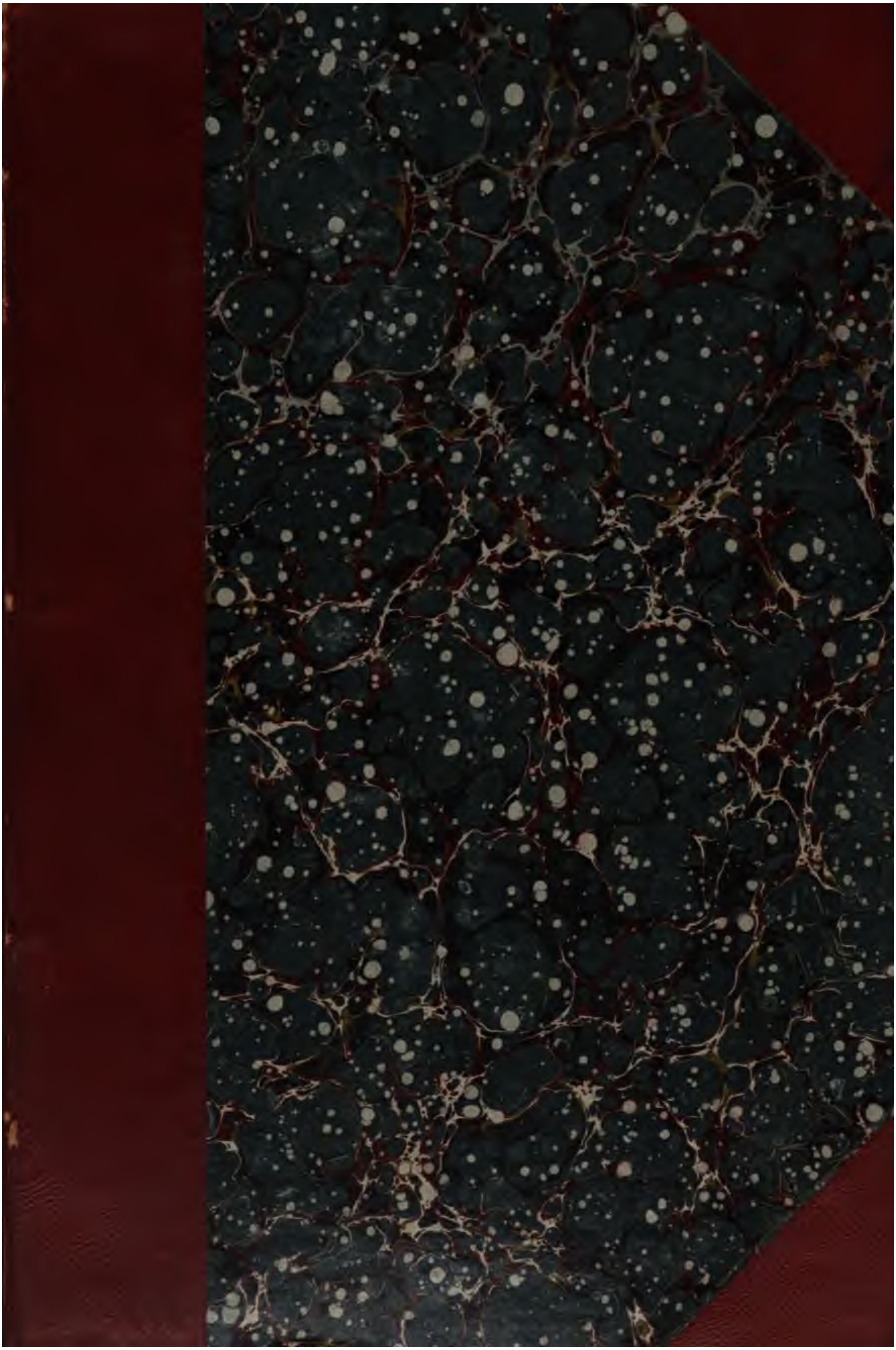

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Proceedings

OF THE

California Teachers' Association

Session of Year 1894

HELD AT....

SANTA CRUZ, CALIFORNIA

December 26, 27 and 28, 1894

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PROCEEDINGS

OF THE

California Teachers' Association

SESSION OF YEAR 1894

..HELD AT..

SANTA CRUZ, CALIFORNIA

December 26th, 27th and 28th, 1894

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ANNOUNCEMENTS

The next meeting of the California Teachers' Association will be held January 2d, 3d and 4th, 1896, at Oakland.

This volume is mailed free to members of the Association—one copy to each member. Copies will also be mailed to non members, or members desiring more than one number, upon receipt of One Dollar.

Copies of the PROCEEDINGS OF THE TWENTY-SIXTH, TWENTY-SEVENTH AND TWENTY-EIGHTH ANNUAL SESSIONS, held, respectively, at Fresno, Stockton, and Santa Cruz, may still be obtained at One Dollar each.

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FIRST DAY

GENERAL SESSION

Wednesday Afternoon, December 26th, 1894.

THE TWENTY-EIGHTH ANNUAL MEETING of the CALIFORNIA TEACHERS' ASSOCIATION commenced its sessions in the First Congregational Church, Santa Cruz, December 26, 1894.

The Association was called to order by President George R. Kleeberger.

Invocation was offered by Rev. J. A. Cruzan.

A chorus of welcome was sung by a double quartette of young women. On account of the illness of Secretary Greeley, W. F. Hall was appointed Temporary Secretary.

Mr. Job Wood was appointed Temporary Treasurer, to take the place of G. W. Merrill, unavoidably absent. The President then delivered the

ANNUAL ADDRESS.

SOME URGENT NECESSITIES IN EDUCATION.

The year 1894 has borne its burdens well. In every field of human hope and labor there has been progress onward and upward. There have been mistakes and failures; but the strong purpose of our age has so generally supported the right and baffled the wrong that the work of the year may well be called "good." One of the best proofs of real advance is the fact that the world is not at ease, the existence of a general unrest in all fields of activity.

As a part of this general feeling, ***educational*** unrest is a fact that cannot be ignored. Educational progress seems sure, but it is too slow. The schools of to-day are truly the best the world has ever seen, but they ought to become more rapidly better. The public, itself the product of the public schools, is painfully conscious of its faults, its weaknesses, and it is demanding in unmistakable tones something much better educationally than it has known in the past.

For the past half-century this fact has manifested itself with increasing force, and the numerous changes for the better in the material and method of school effort during recent years are but the necessary response to this demand. But meantime civilization has advanced with wonderful strides, and progress in educational effort does not seem to have kept pace with the remarkable development of material and spiritual conditions of the last three decades.

The public is undoubtedly in earnest. It voices its demands frequently and persistently. It expresses itself from the pulpit and the rostrum; in the platforms of political parties and in the resolutions of all kinds of conventions; in the columns of the daily press, and even in the pages of our great periodical magazines. When the North American Review, the Popular Science Monthly, and the Forum open their columns freely to articles upon the ways and means of educational improvement, it means that the intelligent public are anxious for better light. Is it not worth while for this Association to consider whether or not there is cause for public dissatisfaction with the schools, and, if so, how to best remedy the matter?

(1) A special committee of the Citizens' Protective Association of Sacramento, in a recent report, says: "Our public schools should prepare their students for citizenship, but this they fail to do." It suggests as a cause: "Our schools are attempting to do a nineteenth century business on an eighteenth century basis." Is there any doubt as to the truth of the complaint? How much of truth is there so far as concerns the suggested cause?

(2) A recent writer in the Popular Science Monthly, speaking of English schools, says: "Ask any teacher who has to do with students fresh from school his opinion of them; he will say that in a great majority of cases they have little if any power of helping themselves, little desire to learn about things, little if any observing power, little desire to reason on what they see; they are destitute of the sense of accuracy, and satisfied with any performance, however slovenly; that, in short, they are neither inquisitive nor acquisitive; and, as they are often idle as well, the opportunities offered them are blindly sacrificed." * * * And he urges further: "We must find a remedy for this state of things, or perish in the face of the fierce competition now setting in." So far as I know, there has as yet been no attempt at a public denial of the above severe arraignment. The charge is no longer general, it is painfully specific; and it declares failure in regard to the development of nearly every qualification essential to good character, good citizenship, and business success.

It is useless longer to indulge in delusions in the matter. The unsatisfactory results of school effort are plainly manifest; and the question is, what is the matter? Why are the public schools not better? How can they be made far more efficient factors in life and progress?

Plainly the difficulty is not that there are no schools that meet the wants of the times. There are excellent schools that almost actualize the ideal in education; but the demand is for more good schools; that schools in general, high and low in grade, be made more effective than they now are. Neither is the trouble because of a lack of knowledge as to what a good school is; for years the best thoughts and best methods of the best educators have been rendered available in educational periodicals, educational reports and in professional educational books. There is a science of education for all who will ask for it; an abundance of definite knowledge of ways to improve the schools for all who want it.

There have been times when the public opposed progressive steps in education; but now there seems to be an intelligent cry from both without the school and within, that there shall be a more general application of improved educational means, whose efficacy has already been abundantly demonstrated.

It will not do for educators to retort that the public is but illy doing its part in promoting progress, which might justly be said; for the public, with all its faults, is largely what the schools have made it. If the public is to be impelled by noble sentiments only, and strive only towards lofty purposes, the impulse must come from schools that are the cradles of character and not treadmills for knowledge-getting, and teachers must be first of all character-builders, themselves the best evidence of their success.

It is true, however, that the public may prove either a serious obstacle or an important aid in the accomplishment of needed reforms. The quality of the teacher will depend largely upon what the public seems to require, and so long as communities are satisfied with anything less than the best available teachers, they must not expect the best possible results. It frequently happens, too, that while intelligent citizens are asking for better schools, the active "men of affairs" —the ward politicians—are making the conditions such as to actually bar the path of educational progress. So long as public economy always begins with reducing school appropriations, so long will schools fall far short of the best; and so long as a "political pull" controls the appointment of teachers, so long will the best culture and character be too rare in the teacher's desk, and so long will an unregenerated public be the inevitable product of the school.

On the other hand, teachers must not lay all the blame of political misrule in school affairs upon the public. Its attitude will depend largely upon the spirit, and purpose, and method, and success of the teacher. If all teachers would discharge their full duty in the best possible way even under present conditions, the conditions would rapidly grow more favorable. If teachers would have their services more highly appreciated in a money sense, they must make their labor produce more valuable results. If teaching is to be a profession, teachers must be professors in the best sense of that term. Moreover, so long as teachers will themselves resort to political methods to secure and hold positions, so long will "political bosses" feel free to fill the schoolrooms with incompetent favorites. If teachers would be free from the thralldom of politicians, they must themselves first refuse to practice, or profit by, political intriguery; they must imbue their pupils, by practice as well as by precept, with such principles of sterling manhood that, in the next generation, a race of men, clear-headed and clean-hearted, shall come upon the scene and sweep the "bosses" from the face of the earth. This is a matter in which teachers need to have convictions, and to be sustained by the courage of their convictions to stand firmly against both the encroachments and the blandishments of the politicians, to raise their voices in continual protest against those who would prostitute the public schools to further their personal purposes.

Remember Dr. Parkhurst and the Lexow Investigating Committee in New York City. If teachers were less like sheep, politicians would be less like wolves. Our country's main hope is in higher intelligence and higher purpose emanating from the schoolhouse, and those who are on guard there must acquit themselves in a manner worthy of the high trust reposed in them.

But aside from changing the attitude of the public towards the schools what can be done? It is easy to indulge in generalities; but are there not some specific matters, attention to which shall lead to higher success? To successfully educate a child, one must have: (1) a proper conception of the ends of education; (2) a proper understanding of what the child has already attained; and (3) a proper understanding of how to develop the child from what he is to what he ought to become.

First, judging by the ordinary results of school work, it would seem that there should be a very different, a higher and a more definite conception of the ends of education than ordinarily prevails. Teaching should be a vocation, and only incidentally an occupation; and teachers should have a definite purpose in their work beyond holding on to a position, and getting the children "over the ground" laid down by the course of study. There is no mystery shrouding this matter; the aims and ends of education have been so ably thought out and so often clearly expressed that it is unpardonable for any teacher not to have thought them, felt them, and been actuated thereby. We should cease to teach as if our sole object were to cram the child's mind with facts. The ability to discover knowledge, to appreciate knowledge, to use knowledge in the processes of thinking and for promoting the world's progress, to properly understand one's own relation to the rest of the universe, to have high and right purposes and to act accordingly—these are the ends the attainment of which will produce men and women of power and purpose.

Nor is it sufficient to hope that one is striving towards a high and noble end, however clearly conceived. It is equally necessary to know when we are failing to attain that end. There are many of us working zealously towards the attainment of a definite and proper ideal, working so zealously and so hopefully often that we fail to recognize that our plan of procedure produces incompetents, crammed with uncertain and often useless knowledge, instead of the capable men and women of noble character and lofty purpose so necessary to the world's success. The possibility of reform requires the recognition that reform is necessary. Well, we are saved further trouble in that respect; the outside world—our own product—pronounces the result not good and demands reform; we have but to look in order to recognize the justice of the demand.

Further, it is incumbent upon the teacher striving towards high educational ends, but conscious of past failures, to reform the plan of procedure. It is useless to go on in the same old way—that is inviting more failure for the future. Let us carefully inspect the material and the methods of school work, to discover if they are adapted to the end in view.

What shall constitute the curriculum of our schools?

In the past, the theory seems to have prevailed that possession of certain set knowledge of certain selected subjects constituted an education; and the memory, aided by various devices, and stimulated by fear of the rod, was trained to store away the supposed salient knowledge. Teachers taught facts not children. Pedagogical thought considered (1) what knowledge is most valuable as culture; and (2) how to so express and arrange that knowledge as to promote its easy acquisition. Subjects were considered with reference to their relation to each other, and not with reference to the child's development. The relation and arrangement of subjects in course of study and the preparation of text-books with a view to easy acquisition of knowledge were the most important educational matters; the child was only an incident. Anybody who could read could teach. If a subject full of profound knowledge and thought was discovered to be especially difficult and distasteful to the child, it was at once assumed to be full of value, and injected through the course. That knowledge must be acquired in school, for it surely never would be acquired out of school. Conversely, what the child seemed naturally interested in knowing and doing was deemed unnecessary and undesirable as school-work. There was a vague belief that the child had mind powers to be "disciplined," but nature would attend to that, if only the mind be filled with good, solid, substantial facts. It is to be feared that perhaps the thralldom of this superstition may still too frequently hold sway.

What shall be the basis of selection of school subjects in our day, —bearing in mind that power and purpose, not knowledge, are the essential ends of education? Subject matter is to be valuable as material for the child's mind to use not necessarily to remember. Let the subjects selected be full of what is most closely related to the child's life, and therefore to his interest: for unless this requirement —meeting the child's interest—be fulfilled the selection must be largely in vain. Let the curriculum simply broaden the child's present environment, proceeding "from the known to the related unknown;" and let the selection be as wide in scope as ordinary human thought and activity. And here arises the problem of the common school curriculum, of the great scope and variety of subjects, and but limited time for their mastery. How is it to be solved? The answer is already in the air for those who are really seeking it; it consists in the correlation of related subjects, and concentration of the child's effort upon a few lines of research and thought. Do not attempt to master subjects; develop children, not teach subjects. The bnrden of the curriculum will not be felt if the subjects are used to help develop the child, and not the child to help develop the subjects. Let the child use facts as an aid in the acquisition of power, and not bend all his power to the acquiring of facts.

Is it not worth while in this connection to re-think the whole matter of the value of the higher mathematics and foreign languages as school subjects? Are they well adapted to the development of power and purpose in the young? Are they not rather instruments to aid investigation and research in certain special lines? Are not the natural sciences, History and Literature—the subjects that express Man's environment and strivings, past and present—by their necessarily close relationship to the child, best adapted to arouse his interest, and therefore most successfully to stimulate his activities? Is it not a misfortune that thousands of the young people of to-day, with minds untouched with interest by the richest physical and social environment that the world has ever known, and with souls still unstirred by what philosophers have said and poets sung in our grand old English tongue, are expending their energies in committing to memory abstruce mathematical demonstrations and senseless paradigms, or in making mutilated translations of Homer and Virgil? Is it not time to call a halt? Shall we enter upon the twentieth century under the guidance of John Sturm or follow the leadership of Pestalozzi and Comenius?

But, after all, it is not so much a matter of course of study as it is of method of work—how to develop thought power; how to inspire youthful souls with purpose. There has been much written and said about it in the past; it is time now that we actually do it; and failing to do it by present methods, to intelligently change for the better. Whatever the pedagogical belief of most teachers, judging by the results they produce, their main purpose still seems to be to impart facts. Observe the work of any school, its recitations, its tests, its examinations, its promotions, and see if the main effort is not expended upon the acquisition of supposed facts. Moreover, is it not true that the method of school work too often appeals to motives that tend to the destruction of character rather than to its upbuilding? Is the art of good teaching a mystery? Is there not a science of education? Are there none who consciously teach well? Is it true that the great teachers of the world achieved their succcess by accident? It is no doubt true that much of the so-called knowledge of mind-activities is empirical, and some of it false; but it is equally true that the science of chemistry has not yet freed itself from all of its empiricism and error.

There is much already known to constitute a science of education and an art of teaching; and the rigidly scientific method of observation and experiment is being diligently applied, adding to, and confirming or denying, already accumulated data. The conditions of mind growth, the mutual dependence of the various mind powers, how they may best be stimulated, their scope and limitations, all these matters may be fairly understood by anyone who can and will read, and think, and observe.

One of the best signs of the times educationally is the constantly increasing interest in child-study. The schoolroom of the future is to be a laboratory of research; the child is to develop power by expending energy investigating his enlarged and enriched environment; and the teacher is to investigate the investigating child. Thus, and thus only, can be built up a true psychology of childhood; and upon such a basis only can pedagogic science find sure foundation.

But child-study has another purpose of greater value still; to intelligently strive to develop a child from what he now is towards what he ought to become, it is necessary to know each individual child's present condition, and how his various powers respond to stimulation. Individual teaching, and hence individual child-study, is a necessary condition of success, whatever general plan may be pursued. Classes must be taught by teaching the individuals instead of relying upon class instruction to develop the individual. As another has said, "We should no more think of teaching children in herds than of doctoring them in herds." Systematic experiments with apparatus for making precise measurements are desirable when possible; but, for the present, the eyes and ears and common sense of each teacher must supply the lack of better means. The play-ground and the school-room, under the charge of earnest, observant, intelligent, and sympathetic teachers, furnish the most available and most important psychological laboratories of the land; and the art of observing and interpreting child-activity is a necessary part of the preparation of the teacher of the future.

In conclusion, if it is true that the schools are not fulfilling their purpose, it is important that we, the teachers, dilligently seek the cause and apply the remedy. The schools are the fountain-heads of progress and they can and must be made successful. Whoever intelligently hopes for the permanency of government by the people, must view the public school with no less of alarm at its failures than of hope in its possibilities.

When all is said and done, the failure or success of the school is not a matter of equipment or systems, or text-books or curriculum; it is a question of the teacher, and when we bear in mind that less than 26 per cent. of the teachers in California have made special professional preparation for their work, and that 67 per cent. have had no higher education than that of the grammar school, it can no longer be a matter of surprise that the ends of education are so indefinitely conceived and its processes so imperfectly performed.

Is it not time that California should demand protection for itself and its children, against teachers who do not make reasonably adequate preparation for their high office? If the State will only install in every schoolroom of the land a teacher trained to do the work of the schoolroom, guided by the best educational light of our age, with a mind enriched by contact with the best thoughts and sentiments, a soul inspired by high purposes, a personality glowing with sympathy and vivified by power—then, and then only, shall the school fulfill the wants of the age as the great instrument of progress and reform; and then shall the teacher, like unto the greatest teacher of all, become again the world's true light and leader and hope.

The work of the afternoon sessions of the Association had been planned to consist of related series of addresses, covering the Report of the Committee of Ten—discussing, first, the School Curriculum; second, the Teaching Force; and lastly, through the Superintendents of the State, The Difficulties in the Way of Applying the Ideal Curriculum and Employing the Competent Teacher.

The topic for Wednesday afternoon being The School Curriculum, Professor George H. Howison of the University of California, and Professor Earl Barnes of Stanford University delivered addresses, of which the following are synopses:

THE IDEAL CURRICULUM

PROF. GEORGE H. HOWISON

I. There *is* no "Ideal Curriculum,"—no single and entie courrse of study perfectly reasonable for all pupils alike.

II. Ideality, in school matters, confines its sober ambition to adjusting education in the most reasonable way to the actual imperative needs of the pupils and the society of which they are members; looking at both society and pupils not merely (1) in the light of their final ideal aims, but also (2) in that of the actual conditions under which they have to live.

III. School idealism must therefore express itself in a rightly divided school *system*, instead of in a curriculum;—a system based (1) on the comprehension and adoption of the distinction between education as ***Liberal*** and education as ***Vocational***; (2) on the persistent provision for both in every school; (3) on a distinction philosophical and real, instead of merely nominal and customary, between education as *Primary*, as *Secondary*, and as *Higher*.

IV. The reasonable school system will accordingly divide schools into (1) those of foundation-studies identical for *all* pupils, because indispensable either as preparation or else as seed-ground for any and all further studies,—Primary schools, all of *one* type; (2) those of studies differing for different *classes* of pupils, classes that, because of different powers and different relations to self-support, must look to different vocations—Secondary schools, of very many *different* types; and (3) those of studies in final specialization and original research, differing for *each student* as each may elect—Higher schools, chiefly Universities, again of a *single* type, probably, but comprehensive of all possible mature personal choices.

V. The great error of our American public school system hitherto, is its ignoring this vastly varied character, due to vocational differentiation, that belongs intrinsically to the Secondary school, and its limiting the conception of the Secondary school to a single type of it, which is essentially only a school preparatory for college.

VI. Nevertheless, the vastly diversified vocation schools of the Secondary education will not only retain among them, as one type, the college-preparatory school that forms our customary high school or academy, but the Secondary conception rightly applied will extend this school upward to include as its necessary complement the old college, this college and its preparatory studies forming the Secondary school for those whose gifts and power of self-support assign them the high but exacting vocation of illustrating culture and promoting its increase; moreover, every Secondary school, of whatever type, while its studies are dominantly directed upon a vocation, must securely provide for the Liberal factor indispensable in all education; and the most essential part of this it directly provides for, in planning for the foundation-layer of common morality by insisting on the duty of honest self-support and self-respect.

VII. Every reasonable and practicable project for a school system, especially in the Secondary stage, must not only provide for such ever-continuing improvements as will meet the advancing needs of its public, but must avoid introducing changes faster than the *status quo* will permit; it must have constant regard to the historic growth of the actual schools as well as to the public needs, and must respect public opinion while resolutely acting to lead it.

VIII. The foregoing principles prepare us for a right estimate of the *Report of the Committe of Ten*, and lead us to say:—(1) Its adoption throughout the country would effect a decided improvement in our traditional Secondary school, not only (*a*) by securing a uniformity of curriculum now missing and greatly needed, but (*b*) by improving , on the whole, the value-scale of subjects taught, so far as this depends on time-allotment; (2) its prudent strength lies, probably, just in its close adherence to the main lines of our present Secondary scheme; but (3) its defects, as an ''Essay for the Times'' on Secondary education, consists in exactly this adherence to the frame of the Secondary school as it is; an adherence that prevents attention to two urgent needs, viz., (*a*) thoroughgoing *differentiation* in Secondary work, to meet the fundamental moral demand for a training that will qualify for the varied vocations, and (*b*) far-reaching changes in the *time-range* of Secondary studies; hence, (4) its recommendation of Four Parellel Courses, in one school preparatory for college, yokes together two aims that are essentially divergent, for the most effective work in each of which, as well as for the safety of Higher education, Courses I. and II. should be assigned together to *Latin Schools*, and Courses III. and IV. to *High Schools*, with the definitive understanding that the latter do not qualify for the college or the university; moreover, (5) its hints of a needed extension, both forward and backward, in the time given to Secondary studies in the whole school life, should be carried out into specific detail, the present error of calling studies Primary up to the ninth year of school life being corrected, and the beginning of Secondary work being properly set for the opening of the fifth school-year, or, at latest, of the sixth; in the case of the Latin Schools, moreover, the Secondary period should be extended forward also, to include the field of the old colleges, or the first two years of the remodelled colleges of higher grade; but (6) its gravest defect is its missing its great opportunity to enforce the fact, that, for the overwhelming majority of pupils, Secondary education, to be consistent with solidity of self-respecting and dutiful character, must, while securely providing for some pure culture, be proximately and effectively aimed at *vocations*, and that its needs cannot be met by the single type of school preparatory for college; the unanimity of the Report in this respect, and of the reports of its nine auxiliary Conferences, is one of its strangest features, but is explicable by the composition of the Conferences,—not in respect to persons, but to institutions and professional duties,—and by the form of the questions put before them, and is consequently not decisive; finally, (7) any drift the Report incidentally has toward giving Courses III. and IV. in its final Table an equal value with Courses I. and II., either in intrinsic educative power or in preparation for college and university, is destitute of philosophical justification; if such a drift exists, it is peculiarly harmful in respect to the conditions for admission to universities, and thence to true university work, and should be steadfastly resisted.

THE IDEAL CURRICULUM

PROF. BARNES

In determining what we shall teach children we must be guided by three things. First, our ideal of life—what we want the child to become; second, the nature of the material we have to work upon, that is, the child himself; third, the effect of different studies upon the inner man.

To put it differently: We must know what we want to make; we must know the nature of the stuff we are working with, and we must know the effects that can be produced with the various tools at hand.

The ideal of life in ancient Sparta was a strong warrior citizen. Experimentally the people found out how to produce such a man, and for seven hundred years they kept up the supply. The ideal of India was the contemplative sage; experimentally the Hindu found how to produce such a man, and for centuries the supply did not fail. The ideal of China was the civilian versed in Chinese lore and precedent; experimentally the Chinese found how to produce such a man, and for a thousand years the supply has been equal to the demand.

Throughout the world's history, down to even our own times, each great civilization has wished to realize some particular ideal, or, sometimes, two or three distinct ideals, and we have had the Athenian, the Roman, the early Christian, the Teutonic Barbarian, the Ascetic, etc.

To-day we have a new ideal to realize. We want each man and each woman to be the most perfect man or woman he or she is capable of becoming, regardless of any fixed type. Instead of developing a type, we want to develop the individuality of each person, for we believe this is a sane and healthy measure and that natural development needs no advance. It may be truly said that to-day we have as many ideals of manhood and womanhood as we have children growing up into manhood and womanhood.

This new ideal demands not so much a formulating of the type of being to be produced as an intelligent understanding of the nature of the being we are working with and his possibilities. Instead of forming a boy, we are, through education, to give him a chance to form himself; and this demands of us a knowledge of his nature and his possibilities.

The pedagogue of past ages needed to keep his eye ever on the pattern toward which he was working. We need to concentrate our attention upon the nature of the child we are working with and the effects we can produce upon him with our various tools—that is, our studies.

Our knowledge of the materials on which, as a body of teachers we are at work, is very meager. We know about as much about children as the Chinese do about the materials of modern warfare. But they are learning—within the past months they have found out a good deal about Krupp guns, ironclads and magazine rifles—and we have found out something about children's physical and mental development.

How ignorant we are, however, will appear if you take a few concrete instances. There is probably not a teacher here who would be willing to risk his professional reputation by stating whether a child will read better at ten years of age by beginning to read at four than he will if he puts off reading until he is eight. Again we all give children dates covering hundreds of years when they have no adequate conception of the meaning of ten years. No inductive study has been made on the development of children's sense of time. In all this line of study we are, however, making wonderful progress. It is no exaggeration to say that in our own country until about forty years ago the school conception of a child was that he was a walking and talking memory to be held still and stuffed. Our progress from this position has been wonderful, but still greater progress lies ahead.

Concerning our knowledge of the effects of various subjects of study upon the minds of real children, the less said the better. I question if any of us here ever thinks that he knows what effect a systematic course of formal grammar would have upon an average boy if pursued from the time he is eight until he is sixteen years of age. We think we know a good deal about the effects of elementary science. And yet many of us feel at times like agreeing with Prof. Dolbear when he says: "Something is radically wrong when, after a generation of science-teaching, those who have had the best available teaching in it do not show some of the superiority which is claimed for it in insight, tact, skill, judgment, and affairs in general."

We know to-day that boys and girls experience a great change in their inner lives when about twelve years old. It is the age when they begin to weigh evidence, when doubts arise when they begin to form large ambitions and to have religious experiences. It is the time then they want to deal with things in a large way, when they want to try to grasp their fragmentary collection of experiences into some sort of unity. We all know this to be true, and yet how much do we know about the best kind of tool, that is the best study, for shaping their minds at this period. One advises an exact grind in Latin and mathematics, another would give a great deal of manual training and creative work, and still a third would give rather large and philosophic views of history, literature and science.

This summer I visited a considerable number of the laundry schools recently established in London as a part of the public school system, and as I stood and watched the girls examining textile fabrics, washing garments under just the right conditions, ironing them so as to leave them exactly finished, I wondered whether it was as good as grammar, and then I wondered what effect that sort of work produced in them any way. One thing, at least, was clear. Even if that subject was admirably adapted to the needs of London girls of the lower classes, it did not follow that it would be the best thing for girls in Santa Cruz.

No! We do not know the laws governing the material we are working with, and still less do we know the effects produced upon this material by the tools, that is, the subjects we use.

To ask us to-day to form an ideal system of education with an ideal curriculum is like asking China to form at once an ideal government with a perfect military equipment. Nor can we accept an ideal curriculum devised by foreigners or philosophers, any more than China can accept an ideal establishment devised by philosophers or foreigners. She can learn much, but she must study her own conditions and learn through experience—so must we.

Meantime, however, something must be done. We cannot wait until we know what to do, for two reasons: In the first place, our children would grow up in ignorance; and, in the second place, our only way to find out anything is by doing, and noting results. There are at the same time certain conditions which will help us to select our lines of study with a considerable degree of certainty.

There are certain subjects which are absolutely necessary as tools in mental work—reading, writing, spelling, composition, simple numbers; these are keys to all other knowledge, and so humanity has always placed them first in school curricula.

In the second place, it is clear that if one subject appeals only to memory, while another exercises muscles and senses and all the powers of the mind, the latter is to be chosen and not the first.

Again, other things being equal, the subject that appeals most thoroughly to the child's interest is the best educator. Natural instincts that prevail in the race at large are good, and are to be used as means of education.

Every teacher has his own special lines of strength and interest; these also should be utilized. The teacher who has greatest strength and interest in science should use science in his curriculum more than one who is strongest in languages; and this general availability must be considered in thinking of the child's environment and his future career as a citizen and a bread-winner. In the great International Congress at Chicago the question was seriously debated whether Froebel's kindergarten games should be modified to suit different localities. Put the question in the concrete and its absurdity at once appears. Ought the little plays that grew up naturally in the woods of Germany nearly a century ago to be modified for the use of little children in Santa Cruz to-day? These, then, seem to me tests that we may apply to the new subjects constantly knocking for admission at the doors of kindergartens, primary and secondary schools and colleges:—

Is the subject a necessary tool in future work?
Is it broad in its influence?
Does it appeal to the interest of the child who is to study it?
Are your teachers prepared to teach it well?
Is it a natural outcome of the child's environment?

But this, you say, throws the whole subject back into chaos and leaves every one to struggle alone. No, not so. There is extant a large body of accumulated wisdom, or experience, which is from time to time brought to a focus in a meeting like this or in a report. The report of the Committee of Ten has done more to bring this accumulated experience to a strong and helpful expression than anything done before. It seems to me a wonderfully wise document, and its scheme of studies is destined to largely prevail in the schools of our country. But it was formed, as has been already said, by schoolmen alone. Practical men of affairs must modify it through their work as School Boards, while each teacher must modify it by his own study of the practical environment about him.

As our honored President has said to-day:

"It is not so much a matter of the course of study as it is of the way in which subjects are taught."

The discussion of these addresses was taken up as follows:

PROF. C. H. KEYES:—I believe that as schools have existed, some may be classed as liberal, some as vocational. It seems wrong to divide pupils into classes in early days. Lack of sympathy between men on our street and men in our counting-houses has made our Debses.

You do not know in early youth whether a child is fitted mentally to be a jurist or a bricklayer, and you have no right to choose blindly for him. I would give the child the basis that will not shut him out from what he is best fitted to do, nor spoil artisans and engineers by putting them into professors' and ministers' places.

It may be thought that industrial training appeals only to the thick-headed, but I find more boys that fail along industrial lines than in history and literature. A boy cannot hide his ignorance from his manual training teacher.

It is unfortunate that any pupil who goes through our secondary schools is not ready for the highest educational institution. Every High School study should find its supplement in the college course.

MR. W. F. HALL:—Twelve per cent. of pupils enrolled in seventy-one High Schools in California afterwards go to higher schools. If it is well in the University to give a wide range of electives, why not in the High School? I have doubts about any study into which a boy goes unwillingly. A wise teacher knowing the boy as an individual, not as a unit of a mass, should help him select his course, watch his interests, and lead him along the line of his interest into others connected with this.

MISS L. WASHBURN:—The wrong of our schools lies in restricting the earliest work to the three R's, and narrowing them. Those three R's can be taught better in connection with manual training and natural science. We should not wait till the child is ten years old to put him in the way of making a happy choice of vocation.

At the close of the discussion the Committee on Constitutional amendments proposed the following:

(1) Amend Section V. by striking out after the words "General Meeting" the words "during the Christmas Holidays" and inserting the words "during such days as the Executive Committee shall determine."

(2) Amend, further, by striking out Section VIII., which provides for Department Sessions, and amending other sections to conform therewith.

Action on Amendments laid over under the rules.

Wednesday Evening.

Wednesday evening a reception was given at the Sea Beach Hotel by the teachers and citizens of Santa Cruz, to the visiting teachers and friends of the Association. The program included music, and addresses of welcome with responses.

Welcoming addresses were made in happy vein by Senator Bart Burke, District Attorney Lindsay, County Superintendent J. W. Linscott.

Equally happy were the responses made by President Geo. R. Kleeberger, P. M. Fisher of Oakland, and C. H. Keyes of Pasadena.

SECOND DAY

DEPARTMENT OF PRIMARY AND GRAMMAR GRADES

Thursday Morning, December 27th 1894.

THE PRIMARY AND GRAMMAR GRADE DEPARTMENT WAS called to order at 9:30 A. M., by President D C. Clarke, of Santa Cruz. By previous arrangement, the Department of High and Normal schools met in joint session with this Department.

The topic for the morning being Mathematics, papers were read by Prof. L. J. Hengstler, University of California, and Mr. P. J. Russell, Superintendent of Schools of San Jose.

IMPORTANCE OF THE HISTORY OF MATHEMATICS

PROF. HENGSTLER.

The subject of mathematics occupies a unique position in our schools. If anyone should propose to this meeting to expunge mathematics from the school curricula, I would confidently expect an emphatic and unanimous protest against such an iconoclastic proposition; but if every teacher present had to go through a mathematical course which he may be perfectly willing to recommend or prescribe to others, I believe that many of you would rather see the subject buried in the darkest depths of the past than to undergo the ordeal. Mathematics is admitted to be a very pleasant subject to contemplate—after one has, as the classical phrase stands, "gone over it"—gone over, I suppose, in the same way as one would, with closed eyes, make a desperate leap over a deep ditch stretched across the way. After the brave deed is performed one wonders in looking back, how one ever could survive it.

Mathematics has come to be looked upon as a necessary evil, like the measles or the government.

The cause of this state of affairs is undoubtedly that the student fails to see what trapezoids or the Binomial Theorem have to do with his life. His text book, from cover to cover, treats of a dreadfully dreary array of uninteresting facts concerning the peculiar antics which the ghost of one quantity, called "a," will perform when brought into contact with that notoriously slippery ghost of some other quantity called "x," according to the manner in which the two are arranged about two little parallel lines called an equality sign. Can we find fault with the schoolboy if he gives barely half his heart to the melancholy labor of pinning down the evasive "x" so that it will stay for good in its explicit loneliness on the left hand of the equality sign? And whereso he asks with a moan and a shudder, where do all these propositions on the straight line and the circle come from? Is it, perchance, possible that some quaint manuscript of mathematical lore once dropped from the moon or some barren world where cheerless beings wiggle about in two dimensions? Or did some lieutenant of the Evil One deposit this science upon the earth to the great detriment and mental anguish of successive generations of schoolboys? The boy can see no connection between the subject and the facts which make up his life. As far as it appears from the text books and the ordinary instruction, there is nothing to the right nor left nor above nor below the subject; it is contiguous to no other science; it has an absolute existence; it is suspended in midair, and Heaven knows what it is suspended by nor to what attached.

From all this it follows that the young student looks up to this science with a superstitious dread. Instead of going over algebra or geometry, it would in most cases be more correct to say that he slides through under it, for the subject usually remains far above him. Whose fault is it? Let us candidly confess (*entre nous*) that we have all sinned. Some of us have told our classes that the understanding of mathematics presupposes a specially constructed brain, a "mathematical mind," a rare gift in the nature of the gift of second sight or the gift of magnetic healing. The poor boy who has never felt the stirrings of that mysterious mind, will open his mouth and roll his eyes in a frenzy of admiration when the genius of the class makes a stab at some lofty problem in the upper air.

This is all wrong. What we must do before all is to bring our science down from its ethereal height to the level of our daily lives. If a schoolboy once understands that there is mathematics in the way the sun rises and sets; that the walls of his room preach mathematics to him; that a falling stone knows a great deal of mathematics, then his curiosity will impel him to extract from his surroundings that spiritual essence which constitutes the soul of mathematics. For mathematics is an abstraction from the natural sciences, and hence indirectly from the real world against which we are knocking at every step. An abstraction, as such, can never be interesting to an untrained mind; to such an one it is lifeless, colorless, bloodless, a mere shadow, a ghost of a real thing. To direct a young person's curiosity to it we must not cut it off from the real object from which it emanated, but must put it in relief against the solid background of the actual object. To do this we must know something of the genesis and history of mathematical ideas, and hence my present contention is that to the successful teaching of mathematics some knowledge of the history of mathematics is an indispensable prerequisite.

In the first place, I hold that we cannot have a clear knowledge of mathematics or any science without being acquainted with the principal facts of its history.

To know what a thing is we must know what it has been, and the more intimately we are familiar with its origin and its growth the more complete is the possession of our knowledge. The inquiry into the evolutionary process of any organic object necessitates a study of its immediate surroundings; we know very little indeed about it if we do not perceive the place it occupies in the real world. Thus, by studying the history of mathematics we ascertain what place this exact science occupies in the world, both the real world and the world of thought; we find how it grows out of the real life, how it grows up by the side of sister sciences, how it is an intimate and necessary element of our existence. Its relation to the natural sciences becomes more clearly settled, its contact with real life more vividly impressed upon our minds. It is only in this way that we can know what mathematics is. It sounds like a truism to say that a teacher should know what the subject is which he teaches; but how many teachers of mathematics know anything of the nature of their subject beyond an impression that it is a certain body of theorems and formulæ?

However, if the history of mathematics should teach only the simple lesson that mathematics is but the abstract form of the natural sciences, the study of its history would greatly improve the teaching of that delicate subject. Instead of trying to persuade the young student into a threatening intellectual balloon ascension, the teacher would offer him some solid ground to stand on.

This, then, is the first lesson conveyed by a study of the history of mathematics: the position which mathematics as a science occupies in relation to other sciences, and hence its nature and significance in our real and intellectual lives. The history of a subject shows to us what lies around that subject. But it shows more. It shows what is in the subject.

A second important lesson derived from the study of the History of Mathematics has reference to the nature of the mutual relation between the different branches of Mathematics. The beginner studies Algebra and Geometry as two different subjects, and hardly suspects that they have anything in common. A study of their history reveals their connectedness and interdependence, their one-ness of essence and at the same time the distinctive features of their form and method. The historical facts, for instance, that the science of Geometry had developed into harmonical completeness before the Christian Era; and centuries before Algebra had risen to the dignity of a science; that, finally, in modern times, the two sciences became amalgamated, to the great gain of Algebra, which experienced unexpected developments through the alliance,—these facts alone furnish the text for a useful and instructive sermon to the teacher. The fact that algebra is the younger and the more imperfect science is not accidental; its cause is the greater abstractness of Algebra, a point which, in my opinion, should settle conclusively the question why the elements of Geometry, should be taught before Algebra in our preparatory schools.

Again, the History of Mathematics points out the bridge which leads from the concrete to the abstract within the individual branches of Mathematical science and thereby breathes life into Mathematical Symbolism. I believe that one of the chief causes of the unpopularity of Mathematics is its symbolic language. It is artificial, strange, uninviting to the beginner, entirely different from the language which he uses in his every day arguments. Now history will teach him that this language was not artfully patched together like Volapuk, but that there is blood in its veins. Even the + and — signs will remind him of the growth and development of Mathematics. He will learn that Algebra went through three successive stages of evolution. the rhetorical, the syncopated and the symbolic stage. That is, an algebraical proposition was at first argued about very much in the style of a lawyer who is trying to make a point; there was much verbosity, circumlocution and redundancy. Later on it was found convenient to use certain abbreviations in written propositions, to syncopate the technical terms by perhaps allowing a few letters to stand for the whole term. Finally the algebraic ideas were crystalized into symbols, so that the proof of a theorem or solution of a problem now dispenses with words almost entirely. No one can study the science of Algebra without having some consciousness of this process of development. Our school boys can work with formulæ, can reduce expressions, can find what they call the "Values" of x and y in equations; in a word, they know something of the tricks, the art of Algebra. I can see no particular reason why they should not learn more of Algebra as a science, and they certainly would if their teachers knew more of the history of Mathematics. History affords a birds-eye view of the whole science of Mathematics, gives the proper perspective of its divisions and subdivisions; certainly a more interesting and more valuable knowledge than the one conveyed by the usual method of offering the learner detached snatches of these sciences.

It is impossible to popularize Mathematics by skimming along on the surface. The surface is a jungle of sizes and symbols, of figures and strange sounding words, as uninviting at first sight as a cloud of mist. But let the sunlight of intelligence break through the cloud, and we discover beneath it a real world of beauty and interest. The history of Mathematics furnishes the sunbeams that give you an occasional peep into this world, and in this sense its study is apt to evoke interest in a science proverbially, but wrongfully, reputed to be dry and forbidding.

To the teacher the study of this history is, however, of particular importance also, because it furnishes him with valuable methods of teaching. We have often heard it said that Nature is the model teacher at whose feet we might profitably sit as disciples. I suppose nature means the Spirit of Evolution that superintends the things that grow. Nature has taught the tree to start from the soil and grow in the direction upwards, and so Nature has arranged it that all intelligence has its roots in the solid ground of things real, and grows thence upward into the more and more ethereal heights of pure abstraction. First comes the contemplation of the real world, thence follows the abstract speculations of the mind. This method is one which we teachers may trustfully copy from nature. The instruction of the young must be, to some extent, a miniature reproduction of the process of historical development; the method by which Humanity as a whole learnt her lessons throughout history, is the method by which the individual schoolboy will make most favorable progress. I may illustrate this point by the three historical stages of algebra before mentioned. They are reflected in the treatment of every practical problem by algebraic methods. What must be done before all is to translate the problem into symbolic language. It is well known that this process presents the main difficulty to the young student, for when he once has his "equation," he feels that he is all right. The rest can be done as easily as turning the crank of a hand-organ. The process of finding the equation is analyzed in Professor Stringham's revision of Smith's Elementary Algebra, and there we see that the problem passes through the three stages before it becomes tractable by general rules. Take for example:

"If $10.00 were added to twice the money I have, the result would be $150. How much money have I?"

This is the form of the problem in the rhetorical stage. I condense it slightly, using a few convenient abbreviations, and have the syncopated statement:

"Twice the number of dollars I have plus $10.00=$150."

But this is still an awkward form. Modern algebra expresses the problem in the concise form:

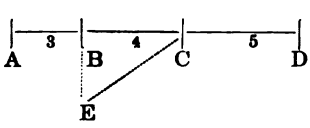
$2x+10=150.$

It is, however, impossible for me to conceive how a young person should or could have enough interest in the statements $2x+10=150$, to wish to perform mechanical operations upon it. Whatever interest attaches to it is the result of the consciousness of the fact that there is a real, actual problem behind it: and that the equation has identically the same meaning which the ordinary language of the original problem readily conveys. By following the lesson of history we bring the Mathematical problems within the sphere of real life and therefore excite the curiosity of the learner. A similar experiment in Geometry has been successful in several cases of my experience as a teacher of Mathematics. Symbolical statements are, of course, an indication of high advance in Mathematics and a powerful instrument in its development; but the chief labor of the teacher, namely: the effort to evoke interest in Mathematical work, is often lightened by the little trick of divesting the geometrical subject under considerations of its technical garb and treating it rhetorically. I suppose it is a matter of common experience that the one subject which of all others exacts the most clear cut logic from the student, namely, Geometry, has, by the universal irony of things terrestrial, the fatal tendency to draw forth from the student arguments of the most bewilderingly exuberant stupidity. I remember the case of a young man who was endowed with the power to think, and was so proud of his argumentative talents that he was determined to become, some day, a lawyer. In Geometry he was peculiarly prolific in the production of unutterable nonsense; but once when this faculty shone with an unusual degree of brilliancy, during the demonstration of a theorem, I asked him what the point was that he wished to make. Upon receiving an answer, I called upon him to imagine that he defended a client in Court; that his classmates before him were the jury, and that his client's life depended upon his success in making that point clear. Referring to his performance of a moment ago, he agreed with me that upon his argument his client would be, and the advocate himself ought to be, hanged; but he offered to try again. And, in fact, after he had descended from the smoky clouds of technical symbolism into the atmosphere of real life, into the rhetorical stage of the science, his argument was so reasonable that the jury acquitted the defendant and I, as the judge, concurred in the verdict.

Among other important lessons taught by the history of mathematics, I may mention for example the question whether the analytical or the synthetic treatment of mathematical propositions is the correct method. History shows that in the first stages of mathematics the method is altogether synthetic, and that the analytical treatment of a question appears at a later period of development; in other words, presupposes a certain amount of intellectual power. We may safely copy this rule from the teachings of history. Nor could it be held that common sense would perform for the teacher all the services which are here accredited to the knowledge of history: for if common sense means anything of value or interest, it means the intelligence not of one person, but the composite intelligence of past ages: in other words, common sense is the knowledge of history. This fact can easily be demonstrated in any assemblage of average intelligence, by, for example, proposing the question: Which one of the three numbers 1, 2 or 0 is, as a mental conception, prior to the others? The common sense of one person would vote for 1; another's common sense would just as positively hold out for 0, and my own common sense would swear by the beard of the prophet that 2 is the correct answer: from all which it appears that there is nothing more uncommon than common sense. History alone can answer such questions. It affords an insight into the nature of quantity, the nature of zero, of positive, negative, rational, irrational, real and imaginary quantity. If we admit that the aim of our educational system is to make men of culture rather than expert computers, we shall not deny that an understanding of the nature of zero is of greater importance than the reduction of a complex fraction by rule of thumb.

One of the most potent arguments in favor of the importance of the history of mathematics remains still to be mentioned. It is the creation of interest in the mind of the student. The teacher of mathematics has two functions to perform: he must before all overcome the traditional prejudice which the young learner has conceived against the subject. We are told that in Plato's time the great philosopher had written over the entrance to his school the inscription: "Let no one enter here who is ignorant of geometry." If this same injunction were not still written over the portals of our universities, the number of students of elementary mathematics would be greatly reduced. Even thus the young persons are often dragged into the mathematics room by the hair of their heads, reciting while they enter, that other famous inscription which Dante placed over the gates of Hell: "*Per me si va nella citta dolente.*" The teacher must, then, before all, excite their curiosity. A little history of mathematics cannot fail to accomplish that result. I have sometimes spent the first algebra lessons by a discussion of the development of systems of numeration among the ancients, beginning with finger-counting. The fact that we count everything in terms of ten never arouses in itself curiosity in the mind of the student; he multiplies and divides numbers and places the decimal point according to mechanical rules without exercising his brain; but he begins to think and inquire when he knows that all this work is done in just this way because, in the beginning, men counted things on their ten fingers. He learns with interest that in almost all primitive languages the word "five" and the word "hand" are derived from the same root; that after having exhausted their fingers in counting, some tribes used their toes; that the word "ten" and the word "toe" may have a common origin [as their German equivalents, "zehn" for "toe" and "zehn" for "ten" indicate]; that some tribes, using the aggregate of their fingers and toes, used the number 20 as the basis of their number system, as the French number, ***quartre-vingt***, 4x20, for eighty, evidences; others used the number 5, counting units only on one hand; that the symbol V for 5 represents an open hand spread out, and our symbol for 0 probably a closed hand; that, in order to keep a record of a counted number, the corresponding number of fingers was printed off in the dust or sand, so that the number 1 is still written as a vertical line representing one finger; that finally a counting machine called the "abacus" was invented, of which we have still an example in the Chinese swan pan; that a class of Roman boys engaged in a lesson in arithmetic would be seen to perform finger exercises on the abacus very much like modern boys practicing their finger exercises on the piano.

Again, the young student will be interested to learn that, according to Herodotus the origin of Geometry may be traced back to the inundations of the Nile; for the devastations made by that river compelled the Egyptians to give their attention to land-surveying and the properties of figures. In connection with the Pythagorean proposition he will be astonished to be told of the Egyptian "rope-stretcher" who knew a special case of the celebrated theorem 2000 years before Christ. The "rope-stretchers" were people who superintended the exact orientation of buildings, by obtaining an accurate North and South line, and also an East and West line. By observation of stars they obtained their North and South line; then, to get the East and West line, they used a rope divided into three parts of the relative lengths of 3, 4 and 5 units; at the point B where the corner of the building was to be, they fastened a peg, likewise at C, distance BC being = 4; then they brought the extremeties A and D together at the point E where another peg was fastened. BE is then the required E and W line. For the numbers 3, 4, 5, satisfy the relation $5^2 = 3^2 +$



4^a. When the Pythagorean proposition is taken up at school, a little information on the great philosopher who discovered it and his Masonic fraternity would infuse enough of the human element into the theorem to awaken the young student's curiosity.

These are only a few examples of the method of infusing blood into the veins of mathematical science. A study of its history will suggest many others. Biographical notices of the great mathematicians, and interesting incidents in the history of mathematics need not, however, be used merely as a trick to enveigle the recalcitrant youth into the study of mathematics; for it is certainly essential to the development of culture that we should know something of the development of human thought in its exact form, and that we should conceive more than a shadowy impression when we hear mention of the great names of Pythagoras, Euclid, Archimedes, Apollonius, Newton, Leibnitz or Descartes.

MENTAL DRILL IN MATHEMATICAL TRAINING.

Mr. Russell.

Whichever way educational thought may be now drifting, it is not in the direction of mathematics. The study of arithmetic is not considered of the same educational value as formerly, and, perhaps, rightly so. While this is true, yet a thorough knowledge of the fundamental principles of arithmetic and their application to the practical affairs of life must ever be an indispensable part of a child's education. By consulting the various courses of study of our different cities and counties it will be seen that half as much again time is still spent upon arithmetic as upon any other study. It is natural that this should be so. Mathematics is an exact science. A teacher or parent can better mark the progress of pupils in this study than in language or geography. Devoting so much time to this subject, it is but natural that we should expect great proficiency; whether that expectation is verified or not is the animus of this paper.

We have often been told by the older generation of this day that our pupils of fourteen or fifteen years of age are no more proficient in the essential studies than pupils of that age were years ago. Only a few days since a highly educated gentleman said to your speaker: "Why is it that with all the years you modern educators devote to the study of arithmetic—from the time the boy enters until he completes the Grammar grades—he knows so little about the logic and analysis of it? Your pupils attend school forty weeks in the year, we went from eight to twenty—oftener eight; you have trained teachers with Normal School certificates and pedagogical diplomas. Our teachers knew nothing of pedagogy as a science, and they never saw the outside, even, of a Normal School building. We had no charts, no apparatus, no supplemental books, while your school rooms are bedecked with educational paraphrenalia and adorned with libraries; and yet the average boy or girl fifteen years old, thirty or forty years ago, knew more of arithmetic, could solve more difficult problems, could reason and analyze, and were stronger mentally than the boys and girls of that age to-day."

You may, or you may not, agree with him; probably you do not. We don't usually agree with one who criticizes our work; but I submit to you, my fellow teachers, if in the above criticism there be not room for at least earnest thought; think of your own school life in the long ago, of your classmates, of their scholastic ability in that line, and tell me if the man did not approach disagreeably near the truth. We are all here by ourselves, let us own up to this much at least, that with all our "fads" and "hobbies," our charts, numeral frames and books whose names are legion, that we do not obtain result commensurate with the amount of time devoted to that study. If there be a doubter among you, there is a way that it can be proven, and that is by consulting our High School and our Normal School teachers. Statistics show that between 80 and 90 per cent. of the pupils attending our High Schools and State Normal Schools enter upon grammar grade diplomas, granted by County Boards of Education upon their completing the grammar schools. These pupils come not only from every county in the State, but—say in the course of four or five years—it is but fair to presume that nearly every school district in our State is represented there, and represented, too, not by the dullards, but by the very brightest intellects in the schools. Now, if a great majority of the pupils entering these schools show a deficiency in any one study it is a most convincing proof that they have not had the proper drill and training in that study.

The teachers of the San Jose Normal School say, and they are here, they can speak for themselves, that the pupils entering upon these diplomas in the past few years not only show poor training, but they show an alarming and deplorable deficiency in that part of arithmetic which requires any logic, reasoning or analysis. Prof. Pennell of the Chico State Normal made a similar statement to the speaker a year ago, and the half dozen High School teachers with whom I have talked have uniformly endorsed the above statements. Then so far as the northern part of our State is concerned we must accept these statements as facts. I did not inquire of the southern part, for if Southern California is deficient in anything on earth I should not dare to mention it if there was a representative present from that "Land of the Angels."

Now, if it be true, and, with these facts staring us in the face, I don't see any use in denying it, that the New Educators do not obtain as good results proportionately as did their fathers in this vital study in our grammar schools, it may become us, after we have listened to learned dissertations upon "Child Science" and "Child Study" and the development of this faculty, or that, to stop for a moment and, in the language of the street, "see where we are at," to get our bearings, our distance from port and our rate of drifting.

All work in arithmetic is divided into two parts, the operative and the logical; the one requires the exercise of the memory, the other the reason. The boy must first know the fundamental processes of arithmetic. The 45 combinations and the multiplication table are acquired by memory, sugar-coat them as you will, apply all the fads and cunning devices known to the New Education, yet it is memory pure and simple. True, by this constant drill he soon comes to know by association that 9 times 8 are 72 or that 7 and 8 are 15 without any mental effort. By the time a bright boy has been in school four years he knows the above thoroughly, and the rest of his time must be devoted to the reasoning, the logical part. The operative parts are merely the tools with which he builds his mathematical education. True, tools are essential; without tools and machinery that matchless structure, the Brooklyn Bridge, could never have been erected. And yet, how insignificant and puerile are the tools and machinery used in its construction compared with the Godlike intellect and attributes that planned that magnificent structure and controlled the mighty power that stretched those prodigious cables and lifted the huge girders in their places. But the difference is not greater in the degree of importance than between the operative and logical parts of arithmetic.

Upon this subject we have neglected the very part most needed. That food that would make the boy strong, self-reliant and robust we threw away and fed him upon husks. The professors in the high institutions do not complain that our pupils cannot add and subtract, multiply and divide, but they do say, and I for one agree with them, that the power to think and reason is sadly wanting—for it has been woefully neglected.

For this state of things we teachers are responsible in part. Boards of Education are responsible in part and the State itself is responsible for a great deal.

A few years ago the Legislature, in its infinite wisdom, voted to start the State in the school-book business; it constructed an arithmetic. I don't say it is the worst book ever written upon that subject, but the educators having it in charge did not think mental arithmetic—the primer of logic and reason—of enough importance to publish one, and so County Boards of Education, compelled to use the State series and no other, were obliged to base their mathematical course upon this book. The first year a certain grade was to complete say to page 80, the next year from 80 to 130, and so on. If mental arithmetic was mentioned at all in the course of study it was to say that some mental arithmetic should be taught daily. The teacher had all that she could do to complete those pages in written arithmetic for which she was held responsible and in which her class must pass a written test at the end of the year. She usually complies with that requirement of the County Board of Education by mentally resolving each day that she has no time for mental arithmetic. So this, the most useful study in which a child was ever trained—a study that stands incomparably above all others for mental discipline—a study that we carry into our daily life more than all others—has been completely thrown aside. Instead of beginning at the basis of the subject, and, with the simplest numbers, develop it by making each problem a little harder than the preceding one, until the principles, the logic, is perfectly clear and plain, we place the State Series Arithmetic in the hands of our boys and girls and set them at work to cipher.

This is done before they have had any mental drill upon the underlying principles of that subject. They work for the answer in the book, and if by multiplying one number by another they do not obtain it, then they divide; and so they continue adding, subtracting, multiplying and dividing, ad libitum, until it is obtained or they receive assistance elsewhere.

The problems in the State Series are so difficult that no child has any business to struggle with them until he has begun with the very simplest problems, I care not what subject he takes up, and then slowly, step by step, he has reasoned and analyzed and knows why he divides and why he multiplies, until he is perfectly familiar with the logical part and thoroughly knows why he takes each successive step. Some of you saw Sandow exhibit his wonderful strength. He handled a 300-pound dumbbell with one hand as though it were a toy; with a platform across his chest he held up three horses. How did he develop such wonderful strength? Not by trying to raise a 300-pound dumbbell with one hand at the first lesson nor by lifting three horses at a time, but by beginning with the light bell first and slowly but gradually working up to it. Even now in his daily exercise he rarely uses a dumbbell that weighs 20 pounds.

Should not the same law hold good in the development of the mind and the intellect as well as the muscles? Is it not really these light mental gymnastics that we need?

I know it is almost an insult to the New Education to suggest that we could profit by any method of forty years ago; but I seriously believe that we could make no greater improvement in our methods of teaching arithmetic than to do as they did in one respect and that is to put a mental arithmetic in the hands of every pupil.

The older ones of us here can well remember that when we had learned the fundamental principles of arithmetic, when we could add, subtract, multiply and divide, Warren Colburn's Old Mental Arithmetic was placed in our hands and we were obliged to master it. Every boy was obliged to stand upon his feet and analyze and reason. No one could assist him. He must work out these problems by his own mental effort; he wasn't working for answers simply. The problems were nicely graded in each subject. It would begin in the very simplest propositions and then slowly step by step through the more complex. When he could analyze every problem in that subject, it was a difficult one indeed in his written arithmetic that he could not work by the aid of his pencil. And so day after day he had this same drill; he became strong. This power of close reasoning he had acquired, enabled him to grasp the most intricate and complex problems.

What Geometry is to the High School, what Trigonometry is to the University, Mental Arithmetic is to the Grammar School. All Educators are a unit upon the proposition that Geometry is one of the most useful of all studies for mental discipline. The close reasoning and analysis required there to master those theorems is the close reasoning required in the forum, in the Legislative Halls, and in the practical affairs of life. Abraham Lincoln completed the ten books in Geometry after he had served a term in Congress; he said that he felt the need of that power to reason more closely. Were we to make a list of the great scholars whose names adorn our histories, we would merely write the names of the great logicians like Bacon, Burke, Pitt, Carlyle, Emerson, Webster and Lincoln, whose logic and close reasoning will for centuries go reverberating down through the corridors of time. What is an educated intellect but one that has acquired logic and has the power to think and reason clearly upon all subjects. The logic and reasoning required in solving some of the more difficult problems in mental arithmetic is as clear, precise and beautiful as Geometry.

You all remember that old problem in Colburn's Mental Arithmetic, about the two silver pitchers with one cover. When the cover was on the one the pitcher weighed a fraction more than the other, when on the other it weighed a fraction less, and required the weight of each. While the problem in itself is not practical, yet the results acquired in solving such problems—a trained intellect, a logical mind—are among the most practical that school work can ever give. The boy who could stand upon his feet and have the strength to carry that reasoning in his head had no difficulty with written arithmetic; and algebraic statements to him were but play.

The student who has ever acquired this reasoning power can apply this same line of logic when studying the workings of a steam engine or the electric telegraph, or any study which requires careful thought and analysis.

There was a time when mental arithmetic was undoubtedly carried to the extreme. Too difficult problems were required to be solved mentally. Too much time was devoted to it. In some cases careless teachers allowed the work to become semi-mechanical, but now the pendulum has swung back and it has been all swept away. It is said that truth lies midway between the extremes.

The State Series Arithmetic is to be rewritten. Is it not possible for us to bring back this essential study and give it its proper place in our curriculum? Chicago, at a cost of $30,000, during the past month has placed a mental arithmetic in the hands of her pupils. We can do it in either one of two ways. Each subject in the written book might be preceded by mental work, or a separate book, if the law will allow it, might be made, so arranged that each section must be taken up before the written work is begun. The latter plan is decidedly the better. With the former plan the book would be too voluminous. And again with a separate book we could more easily compel its use. I am sure you will agree with me in this. I am confident you would join in an effort to give this most useful study its proper place in every course of study in our land.

At the conclusion of Mr. Russell's paper Mr. R. S Holway read the Report of the Committee on Mathematics, appointed at the meeting of 1893.

REPORT OF THE COMMITTEE ON MATHEMATICS

To the California Teachers' Association:—

The Committee on Mathematics appointed at the meeting at Stockton in December, 1893, offer the following report:—

Understanding that the text-book on Arithmetic is about to be revised, the Committee recommend that the Association ask the State Board of Education to make the following changes:

I. That simple exercises in concrete Geometry be introduced throughout the text-book on Arithmetic.

This work should begin in the primary grades in which the Committee feel that more emphasis should be given to the study of form and space, and less to the mere computation of numbers. Building upon this, there should be a series of progressive exercises on solids, surfaces, lines and angles. Exercises that should make the solution of problems in mensuration the application of the pupil's reasoning power, that should give him the ability to make the simple geometrical constructions, and that should culminate in some demonstration work during the last year of the grammar school.

II. That the Arithmetic be so revised as, in the words of the Committee of Ten, to give "some familiarity with algebraic expressions and symbols, including the methods of solving simple equations."

This work could begin about the fourth year of the school period by interspersing simple problems involving literal symbols. By continuing this practice through the problems on various subjects, the pupils could be made familiar with the use of algebraic symbols and with the simple operations in this notation. Then, avoiding long polynomials and all but the simplest fractions, the equation could be introduced and its use shown in solving problems. The last of this series of carefully graded exercises might be the solution of problems involving two unknown quantities.

The object is not to teach algebra as a science, but to teach the arithmetic better by extending the pupil's use of symbols, and by making more general his habits of reasoning.

It is especially recommended that this slight amount of algebra, as well as the somewhat more extended geometry, be made an integral part of mathematics for the common schools.

It is not intended that the arithmetic shall contain separate chapters on algebra and on geometry, but that the elementary principles of these subjects shall be interwoven with the arithmetic.

The Committee also think there should be no increase in the time now allotted to mathematics in the course of study. The new work introduced will save some time by leading to a quicker comprehension of the arithmetical problems and additional time can be gained by weeding out some unprofitable topics in the present course.

At the Stockton meeting the High and Normal School section referred to this Committee the question of algebra as an optional study. After discussion the Committee decided that in their opinion, plane geometry and algebra through quadratics constitute the minimum in mathematics that should be required in the secondary schools.

Signed:— IRVING STRINGHAM,
MARGARET SCHALLENBERGER.
R. S. HOLWAY.

A spirited discussion followed in which the following speakers participated:

Superintendent J. L. Chipman, San Jose; Professor Irving Stringham, Berkeley; Mr. C. H. Keyes, Pasadena; Mrs. Margaret Hood, Pacific Grove; Mr. Joseph O'Connor, San Francisco; Mr. R. S. Holway and Miss L. Washburn, San Jose.

The time having expired, further discussion was postponed till the afternoon session.

The following telegram was read from Aaron Gove, Denver, Colorado:

"Colorado to California: The Crest of the Continent to the Golden Gate—Greeting. Come in July."

President Kleeberger was authorized to reply and to assure Mr. Gove that a delegation from the California Teachers' Association would attend the National Convention at Denver in July.

Thursday Afternoon.

GENERAL SESSION.

The Association was called to order at 1 P. M. President Kleeberger in the chair.

On motion the choice of a meeting place for the next gathering of the Association was first taken up, and Oakland was selected by acclamation.

The next order of business was the election of officers. The following were elected:

President,
EARL BARNES, Palo Alto.

Vice-Presidents,
F. P. RUSSELL, San Jose. R. F. PENNELL, Chico.

Secretary,
ANNA C. MURPHY, Sacramento.

Assistant Secretary,
W. F. HALL, Vacaville.

R. R. Secretary,
J. W. MCCLYMONDS, Oakland.

Treasurer,
BESSIE G. HASLAM, Santa Cruz.

The subject for the afternoon being "The Teaching Force," papers were read by Prof. Thos. P. Bailey, Jr., and Prof. Elmer E. Brown, of the University of California, and by Prof. Edw. T. Pierce, Principal of the State Normal School at Los Angeles, —Prof. Bailey taking the place on the programme of President David Starr Jordan, of Stanford University.

THE TEACHING FORCE—ITS GENERAL CULTURE.

PROF. BAILEY.

RELATIVE PERFECTION.—There is nothing more perfect than a fly. Man is more complex, but not more perfect. Indeed the average fly is more ideally a fly than the average man is ideally a man. This is the doctrine of relative perfection. Nor can you claim that man is nearer absolute perfection, unless you become as "foolishness to the Greeks," saying, claiming, that man has something within him that makes him capable of corresponding with an infinite environment. But that would be a religious (sometimes called philosophical) way of looking at things. That we may not cause any brother to offend, let us content ourselves with this innocent statement: There are grades of development, in history, in society, in the individual; each of these grades is relatively perfect, if it is healthy; the more complex or differentiated grades are nearer ideal perfection if they have healthily passed through the simple or fundamental stages and still retain the fullness of each grade. Thus the philosopher is nearer the ideal man than the honorable merchant and the scientific specialist, if, yes, if he is both honorable and scientific. In the development of the brain, the fundamental centers of animal life develop before the accessory centers of human life. But woe unto the race if our humanness have not animal health beneath it. Every man, whether he be merchant or philosopher, ought to be relatively perfect, that is, perfectly healthy in body and mind (and soul, if you please). If he would be healthy his faculties must develop or be differentiated at the proper time, and, as they develop, must be knit on to, integrated with, his older self, the rest of him. However, the merchant is not an imperfect man, unless it be that he had in him once the making of a specialist or a philosopher. A million times better be a good merchant than an imitation philosopher! The good citizen, the good specialist, the good philosopher, shall be our types of men, and from these come the teaching force. First be a good man or woman, then if you have it in you, be a good specialist as well as a good man; lastly, if possible, be a good scholar as well as a good man and a good specialist. First, character; second, power; third, scholarship. These three let us study.

GRADE I.—Character.—There can be no complete development of character without the exercise of those activities that make for power and scholarship. Character includes power and scholarship as the germ of the plant includes its branches. Every plant must have its leaves and branches, its flowers and fruit. We prize one plant for its leaves, another for its flowers, another for its fruit. So it is with character. Each complete man must have power and scholarship, for each man must be able to do some one thing especially well—that is Power; and he must know about men and things andbe able to put together what he knows, to integrate, to organize his knowledge—and this is Scholarship. Yet every man is not a specialist, and few are scholars. Character first, last and all the time; then, if possible, Power, through a specialty; and then, sometimes, the true man and true specialist may become the true scholar. In educating the teaching force, whatever of specialized power and generalized scholarship we may hope to establish later, let us first seek the City of Character and its righteousness, and Power and Scholarship will be added unto it as fruitful provinces. Power and scholarship help to form character, but only through character and from character can we secure the truest power, the fairest scholarship.

And how cultivate character? By education, which ought to make wise and poiseful man—*homo sapiens*. How shall we educate the animal man, *homo?* (1) Since he is an organism, and since perfection—our aim—is health, educate his body to be healthy. Organic health, whether in animal or social organism, requires right air, food and exercise. Object not to the word right, ye of physical conscience. *Hygeia* and *Virtus*—health and virtue—are loving sister-goddesses. Take care of food, air and exercise, and the biological instincts will take care of themselves. When the teaching force has finished its biological education, it will be healthy. These are the signs: A good, rhythmical appetite for plain food; a decided taste for fresh air, and for the outward and inward application of its denser sister, fresh water; a regularly recurring taste for, and a constant joy in, timely, poiseful muscle exercise.

(2) Man is an individual. Even dogs and cats and horses—yes, and mules—have individuality. So we must cultivate the instincts of individuality, which, for lack of a better name, I call the psychical instincts. The soul, *psyche*, is an organism. Therefore, it needs air, food and exercise. Ah! How the teaching force needs this education of individuality. Give the fresh air of spontaneous interest, the succulent food of congenial knowledge, the healthy exercise of favored and favorite mental muscles. Not that there must always be interest and congenial knowledge and work of favorite muscles. All work and all play must not be expressive of inner tendencies. There must be adaptive work, labor—*sine labor nil!* Let our teaching force be so trained that adaptive work becomes expressive. Loving some work and some play for their own sake, our coming teachers will learn to love the work-attitude in its time, and the play-attitude in its time. The truly educated man knows no *ennui*. "This work isn't my work, but as I must do it, I'll make it mine, for work is good." "This play is not what I want most, but I will whole-souledly enter into it, for play is good." The educated elect are not of the elective system, but our elect teachers that are to be, will have had their interests and sympathies and tastes widened, because their spontaneities have been respected—because they have learned to feel that labor-work leads to zest-work. Who can put in many-sided interest by drawing out, educating the child's one-sided interests—and so with sympathies and tastes? How much do the children actually give us of their spontaneities, and how much do we extract from them? Our future teaching-force, having had their psychical instincts, their individuality educated, will have instinctive basis of the power of helping other healthy individualities to grow poisefully.

(3) Man is an individual, a microcosm. Hence his psychical instincts. He is also a member of society, the larger organism, microcosm. Hence his social instincts. Even the simpler, so-called lower, animals are social. So in the character culture of our teaching-force, we work for sociality. That social microcosm called the school needs a social atmosphere, a sort of mild and pleasant perennial christmastide—"Good-will to everybody." Then, too, let us have a good appetite for old-fashioned school-friendships, which meant so much to us many, many years ago; which we falsely suppose to be so little to us now, simply because we cannot jump out of our new social integuments into our old, easy-fitting social 'skins. Social exercise is play. Oh! The good old free-playing days of that ideal child's environment, the country school! Those of us that have it still ought to have it and prize it. We must teach our teachers to play and to love to play. Alas, that some children need to be taught to play. Alas, that some grown people either never learned or have utterly forgotten! Play is recreation.

In our development of our elect teacher of the first or character grade we have succeeded only in making him a good animal, a healthy *homo!* Have we, teachers, that much? Turn, now, to the human side:

(1) THE ÆSTHETICAL INSTINCTS.—As health is to the body organism so is beauty to the soul organism. True health is beautiful. True beauty is healthful. Thorough bodily health is a prime condition of delight in what we see and hear. The delight that beauty gives ought to be the subtle health of the soul. Keen sensibilities, a well-poised nervous system—these help beauty to become a joy forever. Says Dr. Joseph Le Conte: "True art (is) this union of the sensuous and emotional on the one hand, with the noblest æsthetic perception on the other. This strengthening of the feebler higher by its connection with the more vigorous lower, and this purification and elevation of the lower by its connection with the higher, is precisely that in which art excels all other means of human culture."—(General Principles of Art, etc.: "Overland Monthly.") Again, our biological figure carries. We want our teachers to grow up in an æsthetic atmosphere—poise, balance, harmony, restfulness in the schoolroom and about it; let them feed upon beauty of sight and sound—perhaps we need to call in the artists and musicians to help us; then, too, let them exercise their æsthetic powers—whether by drawing, painting, moulding, music, literature, philosophy. We want our teaching force to be tasteful.

(2) THE SCIENTIFIC OR RATIONAL INSTINCTS.—These inform us—they cause the search after truth. The psychical instincts of individuality must submit themselves to reason, to law. Thus, led on by our individual interests, we learn to explain things, to reason about them—"To try all things and hold fast to that which is good." But true science neither tries to explain away nor to slap the deepest, purest human instincts in the face. To do that is the province only of a certain sort of self-sufficient philosophy. The scientific atmosphere is disinterested interest in the causes of things. The scientific food is especially the open country or the best substitutes for it we can find. To observe, to experiment, to investigate the things of earth—these are the exercises of science. The teacher of the future will have so much naturalist-instinct, so much of the muscle of scientific method, that he will be able to grapple successfully with those most complex organisms, the children's souls. Such teachers will esteem nothing trivial that comes from a child.

(3) ETHICAL INSTINCTS.—The social instincts bring us together for work and play, but the moral instincts must guide us always when we work and when we play. Of all character-culture this is the most necessary. We may be unhealthy and mechanical and unsocial (though we ought not to be); we may be unaesthetic and unscientific (though we should not be); but we must be moral. May the teacher of the twentieth century be brought up in an atmosphere of kind sympathy; may he feed upon the righteous and heroic characters of literature, history and life; above all, may he exercise himself in right-doing because he loves it; may his temperment be naive kindness unconscious of itself, and his habitude rightness that is bred in the bone!

So much for the differentiation and culture of the coming teacher's instincts. Is this all? No; differentiation is not enough. There must be integration, unitizing, that the character may be a vital organism working for the highest end. What is the integrating, unitizing force, the life within that makes the perfect man? Whatever others may answer, the teacher, the psychologist, and most of the noblest minds of the ages answer, Religion. It is not for us to discuss religious education, which must needs be outside of the schoolroom; but let us hope that our teaching force will be got ready for the spiritual life in the schoolroom, and that each one may have the Higher Life, and have it abundantly.

GRADE II.—Character-training uses special power and uses scholarship as means. In mastering a specialty, power becomes conscious of itself. Our teachers of the second or power grade must be specialists. Be a man first, and then be a strong man in something in some way. The high schools, colleges and universities are full of such men. Yet all teachers ought to specialize on three qualities—interest, tact and sympathy. I call them the pedagogical tri-unity. The means are at hand: study up children and teachers. Study the history that teachers have made in their lives, in their schoolrooms, in the treasures of institution and method they have left us. Study the school-world of to-day. Study the live teacher in the live school, and when you are strong enough, the dead teacher in the dead school—Pedagogical paleontology! Study the children. Begin as a naturalist, and gratefully receive and treasure just what the children spontaneously give. When you gain scientific power enough, experiment by arranging the conditions. Few reach that stage. Fewer still reach the stage of co-ordination. Show me a rigid child-philosophy, and I will show you that mythological scare-crow, The Child. Remember, O teaching-force of the future, that Power must grow out of Character!

GRADE III.—Though character and power need scholarship, self-conscious or philosophical scholarship belongs to a more complex grade—the third. Having no better gauntlet, let me fling down Dr. Stanley Hall's scheme of Pedagogical Philosophy: (1) Physiology; (2) Psychology; (3) Anthropology. I give my own interpretation:

(1) The laws of life as shown in the growth and health of the the organism. To the teacher hygiene is the most important branch, especially the hygiene of the nerve-muscle system.

(2) Biological Psychology (Physiological Psychology plus.)—This treats of the laws of mind as typified by the laws of life.

(3) Anthropology.—This treats of the laws of man as typified by the laws of mind. Sociological ethics and comparative religions are the most important branches.

These are the three grades, and the space devoted to them shows their relative importance. Character, Power and Scholarship—these three—and the greatest of these is Character.

THE TEACHING FORCE—HOW TO REACH IT.

PROF. E. E. BROWN.

We have had a time when the course of study was settled by common consent. We are approaching the goal of a higher homogeneity, but are having a painful passage through heterogeneity.

We are testing certain courses of study, but we are not going to settle until we get a course that has grown—has struck roots down and come up.

The problem is finding principles that go down into the educational consciousness of the whole State and Nation.

We are in the midst of an effort toward securing this course, and the course slowest in evolution is the one likely to be the best.

The reformed course of study must not be put on teachers. It must get hold of them.

Which of our institutions gets hold of the largest number of teachers? The Teachers' Institute is the educational institution that reaches the largest number of teachers to-day, and we must look to that means to bring up the masses at the present time.

It has been my pleasant experience to be in a large number of Teachers' Institutes. I am convinced that Teachers' Institutes are paying investments. One defect, however, in their work is a lack of continuity. They are not knit closely together. Problems are not to be wrought out in one year, but by continued effort from year to year.

The State Teachers' Association has gone on for a number of years, but is troubled by disease of "touch and go."

We take new subjects from year to year instead of continuing. We should get all the teachers to work from year to year determining the ideal curriculum, and so get the whole teaching force centering upon this problem of the course of study.

The council had a discussion to-day on a plan looking toward getting a rooted instead of a formulated course of study, namely, that the council enter into communication with county boards by sending out a syllabus calling the attention of all teachers to certain questions. Teachers are to be requested to work upon these questions, and it is hoped that a part of the time of the next meeting of this Association will be given to discussing the results of this correspondence. The method recommended is this: Teachers shall formulate and report to County Boards, County Boards shall report and send to Council, the Council to bring the matter before the State Association.

Some things cannot be done by this method. Inexpert opinion will not be worth much; but teachers will be interested and get to working along lines of educational progress.

One year from now the Council can not, perhaps, offer a crystalized ideal course of study, but the teachers will have realized an *esprit de corps*, not a feeling that we are marching over the same old ground.

At a suitable time a resolution empowering the Council to carry out this scheme will be offered here. This is a favorable place to begin this movement. Santa Cruz and Monterey have introduced this idea of consecutive work from Institute to Institute, and the movement is not new here.

In the East a Committee of fifteen is studying elementary schools, as the Committe of Ten has reported on secondary schools. The report of this committee will present the best educational thought yet offered on this subject. We of California should join hands. We must avoid an extreme individualism. We should move forward county by county, and state by state and join with the whole teaching force of the country.

THE TEACHING FORCE—NORMAL SCHOOLS AS A SOURCE OF SUPPLY

PROF. PIERCE

To do successful work of any kind one must have three elements of strength. First, he must have some knowledge of the material on which he is to work, of the tools which he is to use, and of the finished product he is to secure. Second, he must have some knowledge of the underlying principles that govern his work, which knowledge necessitates his taking note of what others have done in the same line, of their successes and failures, and the causes that led to them. Third, he must have power and skill to apply his knowledge.

The first is the culture side, without which neither of the other steps could be taken. The second includes the scientific and philosophic sides. These, the culture side and the scientific, may be acquired by study and observation. The third is the art side, using the term in the active sense, and this can be acquired only through practice.

I wish to emphasize this element of power. The progress of the world, the elevation of mankind, calls for work, not for knowledge and theory alone; for work that involves dexterity, for trained workers and for the practical results that should flow from knowledge. Without this, any field of study, any system of education, must lead to comparative failure. The education of teachers is not an exception to these statements. Granting this, then, we arrive at some conclusion as to the necessary preparation of those who should constitute the "Teaching Force" of the State.

I need not emphasize the first two phases of a teacher's preparation, since my colleagues in this discussion have spoken of the necessity for broad general culture and a knowledge of the science of education, though Dr. Samuel Williams of Cornell says: "The idea that the 'know what' needs no aid from the 'know how' is still widely prevalent, even in college circles, and is very apt to be coupled with a shadowy notion of an inborn capacity to teach which needs no direction." However that may be, there is a growing recognition of the necessity for preparation in the profession of teaching. It is not the aim of this paper to note all the lines of work that should be included in this preparation. I propose simply to point out its most important phase and the most feasible and economical way of gaining skill in the application of its principles.

Two things are of co-ordinate importance to one who would succeed as a teacher of children; one is an understanding of the subject matter to be taught, and the other is a knowledge of the child. It is only through this last that we shall ever be able to build up a correct and practical science of education. Beginning with Comenius, the educational reformers, the clear thinkers, have not only claimed that there are some well-defined principles underlying all correct teaching, but that these must be learned through observation of the child and his mental processes.

"Every educational reform," says Stanley Hall, "has been the result of closer personal acquaintance with children and youth and deeper insight into their needs and life." The teacher who would know this psychology of childhood must study it inductively, that is by observation of the children themselves. He must not depend on the statements and generalizations of others except as an aid to the better understanding of the individual child. As observed by a thoughtful writer: "A second-hand knowledge of 'an average' of mental capabilities, borrowed from a few scientific observers, cannot serve as a substitute for the personal study which has become the duty of every teacher. Added to the fact that averages are very deceiving things, and average human nature not less so than averages in general, is the equally valuable truth that averages change from age to age in childhood, as well as from one age to another of the race. The type which we would realize in the child is that which, at his best, he tends to become, no matter what may be the capabilities of his fellows nor the average of his class. What each teacher needs is something that will enable him to place his finger upon the strong and weak points of his pupil; then, no matter what the average of the grade may be, he knows where that child needs strengthening." We must have, therefore, some plan of professional training that will bring the prospective teacher into actual contact with the child.

But knowledge of the subject matter to be taught and an understanding of child psychology are only two of the elements in the preparation of a teacher. Skill is necessary in his work, as in every other calling. This skill must not be the result of mere mechanical habit; it must be able to adapt itself to circumstances, and it can be gained only by actual work with the class. Without this power of adaptability, a teacher is likely to make two errors. If without professional training of any kind he will talk too much, and most of this talk will be over the heads of his pupils, the more so perhaps as his knowledge of the subject is great. In the words of Payne: "A man profoundly acquainted with a subject may be unapt to teach it by reason of the very height and extent of his knowledge. His mind habitually dwells among the mountains, and he has, therefore, small sympathy with the toilsome plodders on the plains below." And though a teacher may add pedagogic theory to subject-knowledge, he may yet fail, utterly, in his attempts to apply his theory to the needs of a class. How can a teacher make use of apperception—that basic principle of nearly all gain in knowledge — unless he knows from experience how to get hold of the real child and find out what and how he thinks? And where can this experience be gained so cheaply and effectually as in a well-conducted training-school? By the very establishment of State Normal Schools, and the character of the work in them, it seems to me that two ideas are clearly recognized, viz: that the principle of acquiring skill through practice is essential, and that it is the duty of the State to provide means for the professional training of its teachers. Compayre says that "Education is an art, skill embodied in practice, and this art certainly supposes something besides the knowledge of a few rules learned from books."

It is a notable fact that in the first pedagogical seminary in Europe, the one established by Ratich at Kothen in 1619, practice was combined with theory, and the students were required to give model lessons. Another of the earliest teachers' seminaries about which we know anything very definite, the one connected with Francke's Pedagogium at Halle in 1704, was the outgrowth of the plan that he had of allowing poor pupils to aid in the work of instruction. When these pupils left his school to teach independently, their success was so marked in comparison with that of other teachers, that Francke's institution became noted throughout Europe. Hecker afterwards established two such schools, the one at Berlin in 1748, receiving aid from the government. Gedike's school, partially professional in character, was also recognized by the government and received financial aid. Gedike in outlining his plan in his report to the King says, "The candidates should listen to the instructions of skilled teachers, study the best educational literature, prepare written works upon pedagogical problems, and finally give instruction themselves, under the supervision of a capable director according to instructions prepared by him.'' Thus from necessity and experience was born the Normal School, and the plan of these first institutions, combining study, observation and practice, had been the general plan of teachers' seminaries throughout the world.

Germany now has about two hundred Normal Schools that devote their whole time to the preparation of teachers for the Volks or people's schools. The course of study covers three years, and consists of a review of the subjects studied in the lower school, with a consideration of them in relation to the learner. During the last two years, the students teach in a practice school which is connected with each Normal, for, as Dr. Kehr remarks, ''A Normal School without a training school is like a swimming school without water.''

France, since 1879, has done more in the same length of time to provide trained teachers for her schools than has any other country. In 1892 there were 172 Normal colleges in the country, every department having been compelled by law in 1886 to support two primary Normal schools, one for each sex. The organization of these schools was a matter of much dispute in the educational congress in Paris in 1889, but the following resolutions were unanimously adopted by the General Assembly:

''A practicing school is indispensible for the professional education of pupils in a training college.

''The practicing school will be attached to the training colleges.

''The practicing school ought to be of the same type as the majority of the primary schools to which the students will be sent on leaving the college,''

As in Germany, the course of study covers three years, the age of admission is from sixteen to eighteen, and all of the students are required to teach in the established practice school.

The educational history of Europe shows us that nearly every country has a system of training teachers, which includes not only the theory of teaching, but the actual practice of the art under competent critics. The Normal school idea has appeared even in the countries of South America; and the far-away Japanese, ''the Anglo-Saxons of the east,'' not to lag behind in the march of progress, have a most elaborate system of teachers' schools that we might well imitate.

It is needless for me to say much to this audience on the history of Normal schools in the United States and of the general course of study pursued in them. When, after the war in 1812, the states were bankrupt, there arose the question, ''What can be done to strengthen the republic?'' and the accepted answer was, ''Give its citizens intelligence.'' No other answer could befit a self-governing nation. This idea called the attention of thinking men to public schools, more definitely than ever before. Interest in the schools aroused interest in ''The Teaching Force,'' and later we find the legislature of New York authorizing many of the academies of the State to spend part of the public money allotted to them for the special purpose of ''educating teachers of the common schools.'' This plan was not a marked success since the students in the teachers' classes received only ''the same kind of instruction in the academic subjects as students preparing for business or for college.''

We owe to Horace Mann's energy and his interest in public schools the appropriation of money by the Massachusetts legislature, for the first Normal School in America. He truly felt that ''Neither a free press nor free suffrage can long exist to any beneficial purpose without the training of teachers.'' As the first shot fired at Lexington roused the people to action from Georgia to Maine, and inspired them to noble deeds for Freedom's sake, so this first Normal School, located on the same consecrated ground, gave an impetus to public education that now carries with it the promise of a better liberty, the freedom from ignorance and vice.

The Normal School has continued to grow in favor in the United States, till there are now over 150 of these institutions supported wholly, or in part, by the State goverments. There are at present at least 30,000 students in these schools, and they graduate yearly about 5,000 teachers. While I recognize the fact that they may not give the broadest culture; while I am well aware that many of them do not give much educational science and philosophy, I am thoroughly convinced that any one preparing to teach in our elementary schools, finds in them special advantages and acquires certain pedagogical habits that he can get in no other schools.

First, he pursues a course of study planned especially to prepare him for teaching, not merely a general course equally well adapted to any and all callings. Each subject in the curriculum must be viewed "in all its aspects, with its antecedents and consequents," that the prospective teacher may be able to lead other minds to a clear comprehension of its essential principles. This consideration of each subject from a teacher's standpoint, is of no small importance in putting the student-teacher in the right relation to his future work. Besides this, in many Normal Schools, the students are early made acquainted with the mental processes involved in learning different subjects, in this way being prepared at the outset to do some inductive work in Psychology.

Second, aside from observing the exemplification of principles and methods in the training school; aside from practice in teaching which is necessary to the attainment of skill, there is the personal contact with children so essential to a real knowledge of educational psychology. The college and high school courses show little recognition of the child. In the Pedagogical course of the university the child is talked about, but if the Professors and students wish to collect data in regard to him, they must either go on a tour of discovery or accept the results of experiments at second-hand. This is far different from personal contact with the living, thinking object, as to their astonishment, many theory-trained teachers have found. The Normal School has the real article in it, and always very much in evidence. This observation, this personal contact with the child, as Miss Haskill of the Worcester Normal School well says, "Creates intelligent interest, sympathetic curiosity; a feeling of charm in the tentative acts, in the curiosities, the failures, the make-shifts, the easily satisfied, the imperious demands, and the unalloyed enjoyments of the infant man." Principal Russell of the same school states that he knows of nothing to take the place of this personal study in a Training School, "for bringing prospective teachers to a right attitude of mind with respect to children and for helping them to acquire the psychological spirit and the love and skill required for the purpose of mental diagnosis."

Third, the Normal School student breathes a pedagogical atmosphere, so to speak, which has no slight influence in preparing him for his chosen work. The artist spirit can develop most rapidly and effectually in an atmosphere of art, surrounded by art and associated with those who think art, and who encourage artist aims and desires; it must have a chance to become acquainted with beauty in all its varied forms. This same principle must be applied in every kind of work, if we would arouse the deepest interest and reap the best results. The working of this principle as applied to teaching can be found in no other place so truly as in a Normal School; here, teachers and students all feel a single aim, a common impulse.

A fourth important advantage gained is a certain mental momentum that impels students forward in the direction of the work for which they are preparing. This has a great bearing on the educational advancement of the State. It is one of the reasons why Normal graduates stay longer than others in the work of teaching. When students-teachers under helpful guidance enjoy their work in the training department, when they come to their teachers cheerfully asking for direction and criticism, there is a great probability that they will continue in this spirit. Dr. Harris remarks that "The Normal Schools have made and are making our best teachers. They make teachers who continue to grow," and he gives another reason in addition to that named for this important element in a teacher's strength, viz: "Their habit of taking every subject in its relation to other knowledge, a habit that insures constant and perpetual growth."

Through their training in the school, Normal students acquire an enthusiasm, as well as a momentum, that sends them forth to their chosen work, not merely intending to teach for a year or two to earn a little money, but inspired by the nobility of the "election wherewith they are called," as the true "teaching force" of the State. And this in fact they become, not only by their work in the schools, but also by their influence over other teachers who have not had their advantages. The enthusiasm they have acquired inspires them with a love for their work, and the momentum they have gained keeps them abreast of the times. According to the testimony of institute workers, the most earnest and active teachers in the corps of every county of the State are those who have specially prepared themselves for the work of teaching in the common schools.

I might continue to note points in favor of Normal-trained teachers, but time forbids. I will speak of only one more. That, however, is to my mind, the most important. Beginning their course with a special object in view, earnest, often anxious, to attain success in their preparation, Normal School students bend every energy for the accomplishment of their purpose, and thus, with few exceptions, keep toned up to the full measure of their ability. This purposeful work and the thought of their future responsibilities keep them in such straight paths of exemplary conduct and duty that they form habits of rectitude which greatly aid them to withstand the temptations of the world. This is a marked result of the training of our Normal Schools. By far the greater proportion of our graduates are pure, earnest, thoughtful and right-minded men and women, worthy, in these most essential respects, to be guides to the young.

If what I have said in regard to Normal trained teachers be true, we have a right to suppose that through them beneficial results to the cause of popular education have been secured, even during the short period of their existence. Facts, I think, will prove the truth of our supposition. Before the time of Normal Schools most of our teachers were pitiably ignorant; some of the subjects to be taught, some, of the work itself, some, of both. Anyone out of employment thought he could teach. Most, even of the best educated, either did not teach long enough to acquire by experience what they lacked in preparation, or else by the time they were ready to do really good work, they left teaching for something more lucrative. The Normal School has shown that it is possible to train teachers for better work, as it is possible to train for better work in any other calling.

Most of our Normal graduates do good work from the very beginning of their teaching career. To put them in every district school of the state would be to save to the people an enormous amount of time and energy lost through the awkward experiments of untrained tyros, to say nothing of the pernicious effects of such experiments on the unformed characters of our children.

The Normal Schools have exercised a great influence in arousing other teachers to do better work, and in creating a demand for better methods of instruction. Gradually they are "leavening the whole lump." During the fifty odd years of their existence they have done more to give general confidence in public education than has any other single influence. Without them most of our teachers would still enter the work through the examination door. Their sole preparation would be to cram themselves with a few facts, their only expectation to drift about from school to school—and drift out of the work altogether, as quickly as possible. In these many ways "Teachers' seminaries have exercised a most beneficial influence." Says a prominent educator, "The moral effect of trained and educated teachers on the rising generation is incalculable. The gain in time, the better and simpler methods of teaching, the knowledge of the children's physical, mental and moral nature, the good order, thorough organization and general spirit of harmony and humanity, which are the results of thorough study of the theory and practice of teaching, combine to make the teachers' seminary one of the most useful and economic institutions of modern civilization."

"But," say some of the friends of popular education, "though we may admit the truth of all you say, yet we believe that the Normal Schools have to a great extent outlived their usefulness. We now demand a more thorough preparation for teaching than they can give. We ought to have a 'Teaching Force' that, to a college course as foundation, have added special training in the Pedagogical Department of some university, or in some strictly professional Normal School. The Normal Schools should no longer stretch out their hands to the boys and girls from the grammar schools and attempt to furnish at one and the same time a training both academic and professional. Such a policy necessarily results in shallow work that turns out, at best, not artists, only artizans."

Without quoting further, I assure our critic friends that I and my co-workers know the deficiencies of our schools better than we can be told. These critics fail utterly to appreciate the situation, largely because they fail also in true sympathy towards the cause of universal education. The Normal Schools were established to prepare teachers for the common schools, and this is their true mission. They are confronted with the plain, practical question, "How may we elevate a great, cosmopolitan mass of people into an organic, intelligent and patriotic nation?" From this "people" by far the greater number of our teachers must come, and the "Teaching Force" can be elevated only by reaching down to the people's schools and first lifting them to a higher plane. Suppose from the time of their establishment our Normal Schools had admitted only college or even high school graduates? Our common schools would to-day be without even their ten per cent. of teachers possessing some degree of training. They would be utterly given over to the guidance of the pedagogically lame and halt and blind. Little by little Normal graduates have raised the standard of work in our elementary schools until now the Normal Schools are beginning to feel the effects in better prepared students. This has been notably the case during the last ten years. In proportion as country and village schools have improved, high schools have multiplied, until now in some states over fifty per cent. of those entering Normal Schools are high school graduates. If all who intend to teach could first be tried by the tests applied in our Normal Schools, great gain would result to the country. Few know how many enter the Normals only to be speedily impressed with the fact that they lack mental ability to do the work, or the peculiar qualifications necessary to a teacher, and who give up the idea of imposing themselves upon the children of the state, when, if it had not been for their brief Normal experience, they would have crammed up for the county examination and have become fully certificated teachers. Few know of the rigid "weeding out" at the close of each term, and no one can ever know of the devotion to duty and the conscientiousness of the teachers in our Normal Schools, nor how carefully the fitness of each student is considered before he is given a diploma. Few understand the difficulties under which the work is carried forward. Under existing circumstances, it is absolutely necessary, if the Normal Schools would fulfill their true mission, that they receive students from the public schools. As all who enter are not equally well prepared it requires a constant effort to provide for their harmonious development, The time given to our Normal course has not been long enough, and the course, therefore, has not covered enough ground. Every step in advance in this direction has been in the face of decided opposition to a more extended course made by a few ill-advised advocates of supposed economy.

Why have our Normal Schools done little else than prepare their students in a somewhat shallow way to teach in primary and grammar schools, as is often asserted by our college and university comrades? Why have they plodded along without any great manifestation of ambition, content to do what lay in their power for the students under their charge? Why have they not taken rank in the field of pedagogy, in special training for special work, with other professional schools? Why have they not given the facilities for this special work that are now to be had in some of our universities? Why, indeed?

Because their immense influence for good has been so gradual in its effects that they have not been sufficiently appreciated to secure for them the support commensurate with their importance to the community, or a support in proportion to the amount received by other institutions that are maintained for the general good.

Last year there were in the three Normal Schools of California over 1,200 students. Nearly three hundred graduates were sent out, carrying their wholesome influence into every part of the State. The State expended $89,500 for the support of these schools, or $75 per student. The Normal Schools of Germany, France and other countries cost the several governments not less than four times that amount per student. Germany, appreciating individual instruction, allows her Normal Schools one teacher to ten students, and the same wise provision is made for most of our State universities, while we must do what we can with nearly four times that number per teacher.

How, then, under these conditions, can more be expected of our Normal Schools than they are doing? Little time is left our overworked teachers for investigation, as most of them teach these large classes named from fifteen to twenty hours per week. This is poor policy, not only because the future teachers of the State should receive more individual attention, but because it robs our Faculties of time to work out some of the great educational problems confronting us.

But I am not a pessimist. Having received part of my education in a Normal School, having observed the work of Normal School graduates in several States, having seen the influence they have exerted on the people, and having had the privilege of directing the work in two of these institutions, I know their strength as well as their weakness. I have full faith in their future, because I believe they possess a potency for good that can be equalled by no other educational institutions save the public schools, of which, indeed, they are a part. While they have not stood still by any means during the fifty-five years of their existence, I believe that a renaissance for them is at hand. They will make greater strides during the next ten years than they have in all their history heretofore. I consider that our California Normals made a great step in advance by adding one year to their course. This has allowed us to plan courses for high-school graduates and for teachers who hold first-grade certificates. The number who are already enrolled in these courses shows the estimation in which the Normal School is held and the growing desire for improvement on the part of teachers. While I am not in sympathy with the idea that Normal Schools should have no subjects in their curriculum that are found in high schools, I believe that they should raise their standards of admission as rapidly as the condition of the schools below them will admit. Thus, the Normal School of the future will be able to do better work, because it will have better material. It will also have well-equipped libraries and laboratories and pedagogical museums. These latter will contain the best educational works, specimens of all the latest text-books, and all manner of teachers' helps, appliances and devices. It will have different phases of manual training, thus fitting teachers to lead the coming generations of boys and girls to do as well as to know. The Training School will exist not merely for the purpose of allowing student teachers to practice, nor alone for the exemplification of the principles that must underlie all good teaching. It will be a teaching laboratory, where advanced ideas, the result of child-study in the same department, may be wrought out in practice and where results may be noted for the benefit of all schools. Finally, this future Normal School will have what is indispensable if it is to attain its legitimate end, viz: — the necessary financial support to allow the engagement of enough teachers so that some of them at least may have the time for the thought that is essential to all intellectual progress.

There are few Normal Schools that are not feeling the effect of the wonderful educational awakening that is directing attention to the so-called "New Education" that is an earnest of a better future for childhood. There is hardly a Normal School that has not radically changed its course of study and methods of work within the past ten years, and from my personal knowledge of their history, their vitality and their spirit, I believe that they will in the future, as in the past, "occupy the very outposts and watch-towers of educational progress," and, in "their doctrines and methods, give conscious and even authoritative direction to educational theory and practice."

It is plain that under existing circumstances the "teaching force" must be drawn largely from the Normal Schools. So long as salaries range only from $400 to $800, even in this State where they are higher than in the majority of the States, college and university trained teachers will not compete for positions in the common school. I know that some of our friends say that it is better to have a few who are highly trained and to depend on them to elevate their co-workers, than to have all our teachers with some training. I disagree with them. If their plan were carried into effect, the country schools would feel scarcely any influence from advanced educational movements. Those who appreciate the importance of the country in the economy of the nation, will grant that "The trained teacher who even partially understands her vocation, who is fruitful in expedients to interest children and arouse their ambition, is needed in the country schools even more than in the city schools. In the country district, the school depends very largely upon the teacher; she is subject to but little supervision; she is not often brought in contact with other teachers, and in her little domain she reigns almost supreme. Outside of and beyond their daily lessons, her influence over her pupils ought to make itself felt for good."

Even in the city schools, though we may secure "Generals and Field Marshals for teaching," it must be admitted that it is wise to require some training of the forces that work under their direction, if we would storm the works of the enemy, Ignorance.

We may rear a few philosophers who may settle many of the questions now before us. They may decide upon the relative values of subjects and make an ideal curriculum; they may determine the best plan of correlation and build, in theory, a grand educational structure; but with it all, our schools will never advance in excellence unless we have teachers who are fitted to attack, with some degree of skill and self-reliance, the individual problems that rise in the every-day work of every schoolroom.

As for the common schools themselves, I can rejoice that they stand in need of no championship; they are too firmly entrenched in the traditions and affections of the people. Our republic, when it stops to think, will always realize that the stream of national life can rise no higher than its source, and that the source is the people, the whole people, the masses that go to make up the State. It will always realize, not only that the benefits derived from free education are given back to the Stafe by the ever increasing wealth and intelligence of the people, but also that free education is indispensable if a "government of the people" and "by the people" is not, indeed, "to perish from the earth." It follows that the State ought not only to assume the responsibility of ordering and supervising her system of free education, but also to insist on the proper preparation of her teachers, especially those who have charge of elementary education, the only education a large majority of her people ever get. The great question before those interested in the perpetuity of our institutions is the character of this primary education and the universality of its application. As President Elliot says: "The duty of the State is not performed so long as a single child of the republic is allowed to recruit the ranks of illiterate and ignorant citizens, no matter with what pride she may point to her free institutions for higher education."

As patriots, we are called upon to deal with present conditions, and these, it seems to me, call for trained teachers in every hamlet and district school in the land. The State can spend money to no better advantage than to support, liberally, Normal Schools enough to meet this call. California spends yearly almost half a million dollars on her prisons and reformatories, and $75,000 on the National Guards; the Normal Schools of California cost annually less than $100,000. Let this proportionate expenditure be reversed, and crime, with its attendant necessity for prisons, guards and reformatories, would soon be reduced to a minimum.

Of the teachers of Germany 95 per cent. have had special training, of France, 60 per cent., and of England, 40 per cent., while less than 10 per cent. of the teachers of this country have been trained for their work. If those countries with their comparatively homogeneous peoples, see the necessity for such a large proportion of Normal teachers, how much greater is our need, if our mixed multitudes from the ends of the earth are to bequeath to their descendants an understanding and appreciation of the liberties that have been bequeathed to us?

In view of all these facts and requirements, ought the special mission of the Normal School to be questioned for an instant, or is there any reason for believing that any other institutions, or departments of institutions, can now or at any time in the near future, take the place of such schools in our educational system?

They are the only schools that offer an opportunity for training in both theory and practice of teaching, and the only ones that offer any means of testing the teaching power of the student before he goes out a certificated teacher. They are the only schools whose definite aim is to reach and uplift the common schools, and through them, the whole body of the people; the only ones, in fact, that stand close enough to the common schools to feel intelligent sympathy with their needs, or to realize their paramount importance.

The Normal Schools can never degenerate into the mere mechanical workshops for learning "devices," which some seem to think they are, nor, what would be still worse, into mere academies of dead scholasticism. Upon their teachers and principals is laid the high duty to discern between the false and true in education; and, in the spirit of this discernment, and by means of "The Teaching Force," to move upon the chaotic waters of elementary instruction until a light shall dawn upon the minds of men that will demand for every child its birthright of rational training; until our public schools shall provide for our children a well-balanced, harmonious development of the entire being—mental, moral and physical; until every district high school shall be a well equipped polytechnic institute, where may be gathered "the practical results that should flow from knowledge, where our sons and daughters may be trained for the inevitable duties of citizenship and of life.

Is this "a vision of the ideal"? Well, be it so. "The ideal is God's promise of expanding life to every human soul," and to nations and institutions as well.

Only let these ideals once find firm lodgment in the minds and hearts of the people and they will soon be wrought out into realities. It is for us, fellow-teachers of the common schools, to spread and establish these ideals, to use all our influence, not only to implant them in the minds of the people, but also to incorporate them in the laws of the State. Our field of labor has no lack of amplitude, and the work of our hands has in it a power undreamt of even by ourselves. These schools of the people are not mere little rivulets whose waters flow to feed some brimming river; they are, rather, like the ocean, from which alone can come the life-giving dews and rain upon the parched and thirsty land.

To you also, honorable Superintendents and Boards of Education, in whose power so largely rests the ordering of our common school courses of study, to you comes the imperative duty of ordering these courses aright. You must investigate the relative value of the studies in our public school curriculum and eliminate everything that tends to become unused intellectual lumber. Your point of view must be that of "the greatest good to the greatest number," and your especial aim to fit that greatest number, so far as may be, for the practical duties that await them in the near future of active life. There is no reason why the State, by means of her high schools, should not give a chance to the boys who want to become farmers and mechanics, and to the girls who ought to know the principles of economic dress-making and of hygienic cooking, as well as those of our boys and girls who have a desire to read Greek or a hankering after the law. And there is every reason why our common schools should be made to fulfill the purpose for which they were designed; every reason why they should be made to reach every child that needs their help and give him a good start on the road of right development towards respectable self-support and honest, intelligent citizenship.

In the realization of these ideals the Normal School must needs be an important factor by continuing to supply a large part of the trained "Teaching Force."

The foregoing papers were discussed as follows:

E. H. YODER:—The road to reform has been through education. We may all agree upon some principles. Teachers are born to be teachers, but teachers may be made better by study and experience.

We ought to have our applicants sifted by Normal or pedagogic teachers. Young teachers ought to be more consecrated. There ought to be some place for inspiration. Any training should give the individual something for himself. The teachers should get spiritual help from a training course as well as practice in child study.

A teacher has truths to present through words and through feeling. He is not solely a person of methods.

The practice school is not always the kind of a school that a teacher is going to teach by-and-by. A person of natural ability can gain by listening, but there is a question as to the virtue of the training school.

MR. R. F. PENNELL:—While listening to the remarks of my predecessors I have allowed my mind to look into the future and form an image of the coming teacher, with the requirements that must be met by her.

The first necessity of this teacher, it seems to me, will be a general broad culture. This culture, far-reaching, intangible in many respects, silent but ever-present, will make its deep impress on the pupil.

Next, this teacher will need special knowledge, but back of special training and general culture and all professional work will stand out clearly the importance of character.

Instruction fades, methods are soon forgotten, but what the teacher is, is never effaced from the pupil's mind.

I would have it written upon the heart of every teacher, upon the walls of every schoolroom :—"Rembember first to be a man or woman," and then, and not till then, can you hope to become a successful teacher.

MR. C. W. CHILDS:—The California Normal Schools give certificates to 250 teachers each year. About fifty go out from the State, leaving two hundred every year to go to our schools.

More than 800 new teachers are needed every year. The Normal Schools supply only one-fourth of all that are required, leaving three-fourths to come from other sources.

Look at the questions given to applicants for certificates by the county boards of the State. They are about the same as those given ten years ago.

The manner of such examinations ought to be changed from the categorical to the topical. Those who come for examination should also be required to have done some professional reading—at least as much as is done in the State Normal Schools.

Is it not possible for the Council of Education to suggest some plan to change the manner of county examinations for the better?

MR. J. L. CHIPMAN:—The product of pure theory makes teachers fit for nothing of a practical nature. We should study the child practically as well as theoretically. A teacher cannot have too much of the right kind of training, but theory is not enough. There are unmitigated petifoggers and many poor physicians, and not all teachers are perfect.

In school legislation the United States is behind all other countries, for here politics control the schools and nowhere else.

A man who would make a good teacher would make a good professional man of any other kind.

PROF. EARL BARNES:—One element has been slighted in this discussion. The County Superintendent is often the greatest obstacle to applying the ideal curriculum and employing the competent teacher. We need a Superintendent to be both a school supervisor and a business man. We should create an ideal for our Superintendents, for an ideal is a power.

Mr. John Dickinson:—Many of the greatest improvements have been made by men outside of lines in which they were working. It is not necessary that a man shall be trained in metallurgy to pass on to the armor-clad ships of to-day. A man need not be a teacher to know that there are possibilities beyond.

Mr. W. F. Hall:—We must not put all educational matters into the hands of idealists who know nothing of the common schools.

Mr. C. H. Keyes:—Ten out of thirteen of the people who have been on the programme of this meeting have begun in the district school. All progress does not come from within our ranks. Who has put superintending on the highest plane, a teacher? No, a lawyer, Andrew Draper taught schoolmasters how to be superintendents. We school men must learn on the outside. The man who sneers at ideals has no place among teachers.

Prof. E. E. Brown:—I am in the ranks. I am teaching in the public schools. We are coming to legislation that will demand expert inspectors of the schools—men who shall have their whole time for supervising, which Superintendents only partially have now.

An ideal does not become more practical as it gets lower. The contrary is true. As you elevate your ideals don't forget to become more practical.

The President's address this year contained valuable thoughts, and I emphasize one. We must work our schools out of politics. We shall have to find practical methods of making schools non-political. We must crystalize teachers against political methods.

The report on the subject of mathematics, the discussion of which was left over from the morning session was now resumed.

Mr. R. S. Holway:—Elementary geometry should be introduced into the California Arithmetic about to be revised, so that mensuration may be taught by geometrical methods. Algebra should also be introduced.

We have based our report on the work done in twenty-two counties of the state, that have tried introducing algebra and geometry thus, and have found results to be satisfactory.

Such work is in line with that recommended by the Committe of Ten. At the Educational Congress in San Francisco in May, the teachers there were unanimous in favor of such introduction.

In the East, publishers have prepared books in this way, and this is an indication of public demand.

Mr. F. P. Russell:—In San Jose we have 3000 pupils. In the lower grades we have five or six hundred pupils. At the end of the fifth year we have not two hundred and fifty of these. This shows how many will leave. Mathematics, not in text books, but mathematics, should be introduced early. Mental arithmetic should be put in the hands of the children at the end of the fourth year.

Prof. Irving Stringham:—The Committee has been quite conservative; the changes suggested are not radical. Much of the new work intended by the Committees' report is already done in our best schools.

The Committee lays emphasis upon that part of the plan which makes the work in geometry and algebra an integral part of the mathematical course in the lower schools. In some recent books published in the East, chapters on these subjects are inserted as addenda, to be taken or omitted at the option of the teacher or of the school authorities. While this may be desirable in a book that is to appeal to as many buyers as possible, it is not at all necessary or desirable in our State series.

The Committee seeks that work in mathematics be not in isolated parts, but correlated, so that progress will be gradual and continuous throughout the entire school period.

We wish the State Board to consider this matter in its broadest sense, and we only offer suggestions.

Mr. E. T. Pierce:—I agree with the recommendation. We spend twice as much time on arithmetic now as we should. I speak for the State Board and know they will agree. You must understand the difficulty of combining mathematical processes harmoniously. We are glad of any help we may receive. I believe in professionals making the books, but who are the professionals? Mr. Raymond's recommendation submitted to the State Board of Education at a late meeting brought the ideal to the front for discussion.

Mr. J. B. Hickman:—This correlated work is being done in many cases now, even in the fourth grade. I would have algebra and geometry in the arithmetic for the teachers who are not doing this, but must do it if in a presented book.

Mr. C. W. Childs:—I hope the report of the Committee will be adopted. Perhaps our Board will divide the work and give different parts to specialists. Shall we have two books, one on mental arithmetic?

The report was adopted unanimously.

Thursday Evening.

The Session was called to order by the President. Several musical numbers were rendered, after which the President introduced Hon. Irving M. Scott, who delivered an address, of which the following is an abstract:

ARMOR PLATES AND GREAT GUNS.

MR. SCOTT.

One of the pungent recollections of my childhood is the skillful and unerring deploying of a weapon of war applied to the unarmored boy by a powerful member of your profession, and in all the years since then this is the first shot I have had in return.

Most people are interested in armor and guns and the new navy. At the time of the Crimean War soft armor six inches in thickness could successfully resist the most powerful projectiles used at that time. Now it takes several feet in thickness of the best hardened armor, backed by solid oak, to resist the force of modern projectiles. The duel between armor and gun goes on continually, and at present the armor is ahead, but no one can tell how long it will be so. With better steel as protection, better powder and guns were required. The guns were increased in weight and efficiency.

Compound armor was first made at Sheffield, the sheets being rolled down to twelve inches thick, steel welded to them, making them twenty inches thick, with a facing of tough steel, and then rolled down again to twelve or fourteen inches. This was the best armor the world had when the United States commenced to build her navy. A Frenchman improved upon it, and then Uncle Sam added nickel to it, and when the process of hardening it, known as "Harveyizing," (baking three weeks in an oven where it absorbs carbonic acid gas), was discovered, the present armor was evolved.

The last contract let by Russia was given to the works at Bethlehem, Penn., and was the result of patronizing home industry. Secretary Whitney had enough foresight to make a contract with an American firm so large that it paid to put up a plant adequate to carry it out. The Bethlehem works cost $7,000,000, and the Pittsburg plant $5,000,000.

Another improvement was Whitworth's discovery of fluid compressed steel, made under a pressure of 12,000 tons to the square inch, afterwards hollowed down by the immense pressure of the hydraulic ram, thus excluding gases, air and all other imperfections. Whitworth used the hydraulic forge to obtain his pressure, and inaugurated hollow forging. Under that system shafts fifty-three feet long can be forged, a thing which five years ago was impossible. When the Charleston was ordered the shafts could not be made in this country, and had to be made at Krupp's great foundry. One year later they were made at Bethlehem, and now only the Charleston and one other warship have foreign-made shafts. The last shaft made was larger than the specifications, and the Government would not accept it till the builders assumed all risk of possible damage from using it.

A twelve-inch gun is sixty feet long. The steel is tested when poured, cooled, selected, and at every stage of manufacturing, and finally tested by the Government before it is accepted. When it is ready for oil-tempering it is heated cherry red and dropped into a vat of oil. So delicate is the work that it is raised and turned continually to subject every bit of the surface to an even heat. The popular gun of to-day is the five-inch navy gun, which can be fired seven times in a minute. It is made at Bethlehem. The United States now leads the world in guns, armor, warships and efficiency. The Columbia can sail around the world without coaling. Both it and the Minneapolis have three screws—another innovation—and can make a speed unheard of hitherto in naval architecture. They can pick up any "ocean greyhound" afloat and maintain American supremacy, as the best of them can only average twenty-one knots an hour, while the two ships named showed a speed of twenty-three knots.

The American ship is the lightest, strongest, swiftest, and carries the heaviest armament of any. The Oregon, of 10,250 tons, is of the same class as two that England is building. The Royal George will be of 14,000 tons. The Oregon can throw more metal from her batteries than any other ship yet afloat.

The English lay so much stress on their navy that it makes Americans wild at the "hasty" legislation at Washington in regard to our navy. England takes pains to teach her people loyalty. At the naval exhibition on the Thames Embankment the first thing you see is Nelson's picture and all the relics belonging to him. Then come Rodney and Blake, and before you get through you are inspired by the naval heroes. There is a full-sized model of the Victory, Nelson's ship, with the old-fashioned guns, and in the cockpit are wax figures of the hero with the surgeons and officers around him.

There is also a picture of Sir John Franklin, with all the relics of his expedition. There is a representation of an iceberg, and in the interior a reproduction of the Arctic regions, with the aurora, the midnight sun and a model of the Terror, all visible by electric lights, and a lecturer who expatiates on the glory brought to England by the great explorer. Here also every fleet of England is represented on a map of the waters of the world. Then there is a pond 300 feet square, with 3,000 seats around it, on which is a practical display of naval warfare, an actual fight between a warship and another flying the pirate flag, both being worked by electric wires, in which the pirate is sunk amid applause. Then a ship is destroyed by a torpedo, and a torpedo is shown which carries fifty-five pounds of dynamite and exerts fifty horse-power. Then you are invited around the corner to see the naval cadet drill. Everything to stir the heart of a boy to love of the nation is displayed and made the most of. How can the young man help being inspired by such surroundings? That is why England sometimes votes $100,000,000 to increase her navy. That is why an Englishman is always loyal to his native land. It should be so in this country. The time is coming when we will need it, with the present discontent and the conditions that are charged to one thing and another.

Some of our advantages over older countries are not appreciated. When in China Mr. Scott went to market with an intelligent Chinaman. He wanted quite a number of vegetables, but was told two cents was all the money he needed. He changed one of them for fifty cash (a small coin) and with that he bought radishes, cheese, almost every kind of vegetable the market afforded and had about three-eighths of a cent left. The conditions that made the money go so far were that the vegetable men wore only a breech-cloth, slept on a piece of matting on the floor, and when he cooked his rice, cooked all he could with what fuel he had and ate it cold in order to save fuel. In Italy the peasant gleans the wheat from the field, makes it into flour and cooks the flour into hard, dry bread, so that it will not mould, and eats it broken into milk. So it is in France and England. Mr. Scott tried to figure out a scale for comparison of wages. He found that from China to Belgium the laborer took all he could earn to live on. In Belgium he got 40 cents a day and paid $25 per acre rent. Here we have a population of eight to the square mile and say we are crowded. In Belgium there are 508 to the square mile and England has 416. If the population of the whole United States were moved into California we would not have as many to the mile as

England. We have a barrel of flour to every inhabitant, and complain that we do not have enough to eat. We haven't touched our possibilities yet. In Spain and Italy the vines are on terraces four feet wide and nine feet high, the dirt to make which is carried there from the roads and elsewhere. The fertilizers are scraped up on the roads by young girls, who never touch the grapes or see the wines. Yet we growl, with all our possibilities, and do not realize how poor other nations are.

In Paris you throw away string and paper from a bundle, and when next you want to wrap a package somebody sells them back to you. Your cigar stump comes back as snuff. Your rejected bread crusts come back in small cubes of toast. Rats eat the flesh from the bones of dead animals; rat skins make kid gloves, rat bones make tooth-picks, rat joints make gelatine. Tar runs to waste unnoted in the streets of San Francisco; in Holland tar first makes ammonia, and the refuse is converted into aniline dyes and perfumery. Nothing is wasted, not even the leaves and twigs from the trees.

On the contrary, America spends for her tourists annually in Europe $300,000,000, and leaves in Scotland alone from American tourists $250,000. We can learn to live 50 per cent. better than they do in Europe at half the cost. In Europe it is a necessity. Here it would be economy. At the Waterbury watch factory a pound of wire costing ninety cents is made into 9,000 screws which sell at a cent apiece. The average Californian would start with the $90 and come out with the 90 cents. That is the kind of a lesson we will have to learn, and we can learn them of all other nations. What other nations have done we can do. New York State is about the size of San Bernardino County. It supports about 6,000,000 people, while San Bernardino supports only a handful. England by her energy has dominated the world. California can dominate England, because she can accommodate more people.

Our public buildings and schools are of the best. We have Berkeley, Stanford, the Mount Hamilton Observatory, the School of Sciences—the best in the world. No exhaustion can come to our farms if properly tilled and cared for. We must teach our sons these lessons. They must be broad, true, wise, honest and upright, and they can only come to a nation having truth for its guide and one that worships at the alter of the Infinite.

THIRD DAY

DEPARTMENT OF HIGH AND NORMAL SCHOOLS

Friday Morning, December 28, 1894

The Department was called to order by its President, F. L. Burk, of Santa Rosa.

By previous arrangement the Department of Primary and Grammar schools joined in the meeting.

The subject of the morning being "Art in Education, including Manual Training," papers were read by Prof. H. T. Ardley of the University of California; Miss Katherine M. Ball, of San Francisco; and Prof. Walter Kenyon, of Stockton.

INDUSTRIAL ART

PROF. ARDLEY

As the term, Industrial Art, is so often misused, and cannot, I think, be found in Dictionaries or Encyclopedias, and is often confused with such terms as Manual Training, Decoration, Applied Art, Ornamental Designs, &c., I will define it as I understand it and use it.

Industrial Art means an industry that is founded upon, or governed by art feeling and principles, depending chiely upon art—instead of labor and material—for its value.

It does not mean trades, manufactures or building, as they depend chiefly upon labor or material for their value.

The terms Decorative, or Applied Art do not cover the same ground, as they only imply the ornamentation of something already constructed, while "Industrial Art" may also embrace the construction—if the construction is artistic. When the construction is not artistic the work is simply an industry—but not industrial art.

Thus, one man might be modeling common flower pots, and another classic vases from the very same bed of clay, but one would be an industry, and the other Industrial Art.

Manufacturing a common window sash is an "industry," but making an original stained glass window is Industrial Art.

The one is made by machinery and owes its value to the amount of material and labor involved; the other is made by hand and derives its value from its originality and artistic merit, and may be worth hundreds of dollars—while the common machine-made sash is worth but two.

The making of original designs for carpets, wall paper, curtains &c., comes under the head of "Industrial Art," but the repetition of these same designs by machinery is only an industry or a manufacture.

You may readily see then that this term is often misused, and people given credit for "Industrial Art" when they are simply industrious—without art.

If to make a brick or a block were Industrial Art, then to make any kind of a noise would be music.

The wide scope and use of Industrial Art is practically unlimited, for anything that is useful can be made beautiful. This is illustrated in all our surroundings.

Carpets, wall paper, curtains, book covers, stained glass, furniture, dress, picture frames, jewelry, iron and brass-work, table linen and table ware—in fact nearly all the beautiful things we use are the fruit of Industrial Art.

Its refining influence and educational value is therefore so great that we cannot afford to overlook its importance to the best interests of the state.

When the useful and the beautiful are united by Industrial Art, the raw material of a state must reach its highest market value, and political economists all agree that a state's lasting prosperity depends upon this very uplifting of her raw material.

We are now large consumers of articles of art and luxury, and must either make them at home or purchase them abroad. The question of who shall produce them, is of the most vital importance to the educator and the tax-payer.

"The great problem in the industry of nations has come to be an æsthetic one—how to give attractive and tasteful forms to our productions in order to gain and to hold the markets of the world, and supply the demand made by cultivated people at home.

In order to create men and women to do this important work we must foster and encourage every branch of education that tends to develop artistic thought and manual dexterity.

For the surest way of elevating public taste and improving our industries is to educate our young people in the elements of art, and its application to industrial purposes.

Those of you who visited the World's Fair in Chicago can easily understand how wide a field "Industrial Art" covers in general education.

Three of its most important branches taught in our public schools are drawing, manual training and elementary design.

I will speak of drawing first, as it is the most important as the underlying aid or element; in fact, it is indispensable in all branches of art, science and industry, as it is the language of form, and in use and importance stands next to the language of a people, and is highly educational from every point of view.

What should we know of the history of the world without the drawings of Greece and Rome, Egypt, Assyria and elsewhere. And how could the scientist describe the wonders of nature without drawings, or the student understand them?

If we tore all the illustrations from our scientific works, what would most of them be worth? Prof. Tyndall said: "One illustrated page conveys more knowledge to the student's mind than ten pages of reading matter," and Prof. Huxley called drawing "the handmaid of science."

By its means the whole world is graphically brought before us. The people and their homes, their dress, their occupations and their surroundings—everything!

And learning to draw quickens the perceptions of the pupil. He has to observe more closely—to discriminate and to analyze, and he becomes more neat and exact in his work and can afterwards apply his knowledge of drawing to many other studies.

I will now say a few words in regard to the teaching of drawing in the public school. In the first place I must say that those who do not thoroughly understand the subject are almost sure to take a one-sided view of it and go to extremes, being easily influenced for or against certain systems. Hence some are teaching in a dry mechanical way from copies only—letting pupils use the rule so much that they can do nothing without it. Others—not knowing what else to do—"jump out of the frying-pan into the fire," and actually let beginners daub on paint, or draw from life—even the nude figure—before they can draw anything else. I have been told that it keeps up their interest! I should think it would. Anything so amusing must be interesting.

Astronomy might interest pupils more than mathematics, but that would be a poor excuse for skipping mathematics.

It might interest them to jump into the middle of the Pacific ocean, but they had better learn to swim first or start nearer shore.

The five-finger exercises in music are not as interesting as an opera, but no one begins with an opera.

It would be all right to work this way if we only wanted "Impressionists"—for their work—like the beginning of the world; is "without form, and void."

Now, what is needed, first of all, is a thorough grounding in elementary principles, and to give this practical foundation should be the aim of our public schools, for so very much depends upon starting the pupil in the right way, and however little is done that little should be done well.

The most useful training is that which will enable him to sketch free-hand, anything he wishes to represent the appearance or construction of.

While it is true that one can only learn to do this by drawing from nature or the object, I would not altogether condemn drawing from copy by beginners, until they have some control of their hands, but the designs should be bold and graceful, and copied free-hand.

But if pupils do not draw from the object in the lower grades, they should do so when they reach the grammar grades; and work from the object should be given and required all through the grammar and high school years, but confined to elementary work, until a thorough knowledge of light and shade, and perspective are acquired.

Such models as the cube, cylinder and sphere, and other simple forms that partake of their character, should be drawn and shaded singly and in groups. Variety may be had by introducing fruit and flowers, vases, etc., and by rapid sketchy work in "time drawing," and by drawing from memory. Any teacher who understands this work can interest a class in it.

I would a thousand times sooner have a student come to me with a thorough grounding in such elementary work than one who has played at portrait work, or "painted," just to keep up his interest. And I have tried both kinds.

Drawing, as a study in our public schools, is gaining ground everywhere, but it needs careful direction to be practical and successful. Its special teachers need all the help and encouragement they can get from those who understand it, and should try to work in harmony and assist each other, but not be influenced by every self-made critic who approves or disapproves. Critics are as numerous as flies in August and sometimes know as much. But the value of a verdict depends upon the knowledge of the judge, and is a matter of experience and training instead of taste; for "taste" without training generally means bad taste.

Now, as my time is short, I must turn to elementary designing in our public schools.

Is good original work done there, and can it be? I should say it cannot in the graded schools. Children's minds are not developed enough for original invention and creation, and it would take years of study in professional schools for teachers to prepare themselves to instruct in design.

Children may learn to alter and tinker and "patch up" a design —but are more likely to spoil an old design than to invent a new one.

To design they must first understand the laws that govern natural growth, and the rules that govern ornament and be able to draw. They must also understand the history of decoration (which is an education of itself). Then they must consider the purpose of the design and the position it is to occupy; whether it is to be flat or in relief, or to be carved, woven, cast, printed, etc., or if the material will be wood, cloth, paper, iron, stone, glass, clay or plaster. Then its cost must be considered, its surroundings and the period of art it must follow.

You may readily see, then, that while children may learn to copy after the work of others, they cannot do practical designing in the graded schools, and no one but a specialist can teach it. But very elementary design may be taught successfully in the high school, and should always form a part of manual training in relation to both construction and ornament, or the work will descend to manual labor.

In fact, I think the tendency is already too much in that direction and away from the influence of art, whereas manual training should be a branch of industrial art—for anything useful may be made beautiful, and we can thus elevate public taste while giving a higher class of instruction, and our pupils would then learn to appreciate the beautiful work of others and to discriminate between the good and the bad in all their surroundings.

If manual training is to become merely the training of the hand (as the name implies) it might mean any kind of labor, but when governed by art principles it will lift its students to a higher plane of thought and feeling and place them in touch with both artist and artisan.

The arts have always flourished the most when united—when Raphael and Michael Angelo made patterns for the weavers, the potters and the silversmiths; when, says Prof. Clarke, "the art of the goldsmith was more precious than the gold upon which it was lavished—when the blacksmith so shaped his iron that it was costlier than silver and the weavers wove tapestries whose threads were so inwrought with the thought of great masters that they are still treasured in the palaces of kings."

To have only the technical skill of the blacksmith or the carpenter will not suffice. It is a higher skill, a more refined form of labor, that can alone meet the coming demand, and the training to qualify workers to meet this must be absolutely artistic.

If the Republic is to take and keep equal rank with the leading nations of the world, a love of art and a knowledge of its true principles—with skill to apply them to our industries—must become well nigh universal.

You may answer that we are not making artisans, but merely "training the hand." But why not train hand and eye to greater refinement and more delicate skill, governed by artistic knowledge? You may wake up many a hidden genius to a world-wide fame.

I have known young students of great ability and promise to leave off manual training in disappointment because the work was purely mechanical and without the exalting influence of art.

Of course I do not mean to say that it is so here, or will be long so anywhere, but I know from many years experience in both studio and workshop—in doing the work and teaching it—that the best results must come from the combination of art and artisan—use and beauty—where the skilled hand can express what the artistic mind conceives.

Now, I think the educational influence of wood-carving and clay modeling are not fully realized in manual training, and are often taught by those who have a most superficial knowledge of the subject. I am willing to admit that a teacher's first art should be the "art of teaching;" still I think he should know something about the art he teaches.

Wood carving and clay modeling not only combine both art and industry in those materials, but are the mediums through which so many others find expression, such as work in iron and brass, plaster casts, etc.

Then, as such work must be combined with a knowledge of drawing, design and historic ornament, besides the skillful use of tools, I think it is of the greatest educational value in manual training—especially where technical training is carried through the High school and the University as it should be.

On this subject the President of the great International Educational Conference held in London in 1884, said:—

"The idea of a great University is not to grind a certain number of individuals in a certain limited number of studies and then invite them to write down answers to questions. But the idea of the University is to supply the highest wants of a nation in every direction—not in one.

If the best scientific teaching is to be represented, why not the highest technical education? The task of its professors is to fill every profession, and every walk of life with men who will be able to grapple with the problems they have to face—to invent and to produce, as well as to learn and investigate; to make useful citizens as well as educated ones."

Then let us train those faculties together that must eventually be used together in after life. When young people go forth into the world, they are seldom asked "What do you know?" but generally, "What can you do?"

As it is the mind and hand when united, that are the factors of everything useful and beautiful that we enjoy, let us train them together and avoid a one-sided education, for it is only

When the hand of man is skilled,
And his eye to beauty drilled,
And his brain with knowledge filled
—He's an educated man!

MANUAL TRAINING.

MISS BALL.

In this great world where there is such a struggle for place, social, professional and business, where we realize too frequently "the survival of the fittest," meaning often the strongest mentally as well as physically; and we stop to study the motives and actions of men, analyzing character in its relationship to environment, following in the paths of parallel careers which result in success or failure, we cannot help but realize that the sum total of any life is derived from two sources, from Nature and from Art, or education.

Nature is the creator, and art is the means by which the created is brought forth. Nature is the source of being, and art, or education, is the finding of being, together with the proper exercise of all its functions. Man cannot create, his works are simply his findings, arranged and combined according to his thought or fancy into new forms. All civilization is art, but only that part of it that enables man to retain his natural freedom of thought and action, that brings him things and conditions that add to his comfort, his entertainment and his advancement in good art, while any civilization that makes him a slave to inconsistent customs and so-called proprieties must necessarily be poor art.

The nature of man, the mystery of being, has been the subject of song for ages, but it has devolved upon the son of the carpenter to demonstrate that we are all alike children of the same Divine Father, made in His likeness and image—hence, spiritually perfect, and that we have but to come into a realization of our true being in order to express it.

The flexibility and elasticity of the child mind, adjusting itself to any conditions and responding to all kinds of training, defying all the claims of heredity, is sufficient proof that human nature is capable of almost any development, but the degree of development must necessarily be in proportion to the nature and kind of training. Art or education cannot supply an apparently missing faculty; but it can awaken one that is sleeping, and eliminate bad habits of thought and action, but to do this, the training must be more than an intellectual drill—it must include the spiritual unfoldment, and the discipline and service of the physical, or as we sometimes speak of it, the training of the heart, the head and the hand.

Spiritual training, which must not be confused with religious training, is heart culture, and has for its foundation the appreciation of and love for the beautiful in every expression of thought, the appreciation of the rose, character, form and color, sound, motion, etc., all of which reveal modified forms of beauty, the love and worship of which is innate in the human family and is the characteristic feature that elevates it above the lower animal nature. It has been and should always be the fundamental principle of man's religion, and every educational system should recognize this fact and aim to develop the æsthetic feelings, directing thought to an appreciation of and a love for the beautiful in both the world of nature and the world of art.

Much of education must necessarily be physical training—not gymnastics, but the art of properly using every function of the human organism to the best advantage of the individual; finding oneself in one's body—using all the parts with freedom and ease without consciousness of mentality; acting with grace and agility and with such knowledge as will enable one to express himself in poise and gesture as clearly as in speech.

It is not foolish vanity to desire to appear well. It is right and just and is an expression of the respect we have for ourselves and for our associates.

To know how to carry the body with dignity and grace and to make every action as expressive of thought as is our language, is true art.

We are told that the outer man is an expression of the inner, and surely this is our principal means of judging. It is, then, a great misfortune if an awkward, abrupt manner and a shrill, sharp voice constantly counteract the effect of good feeling and thinking. To be constantly misunderstood is frequently the result of a physical action expressing an idea contrary to the spiritual and the mental thought.

The soft, sweet voice that soothes and pursuades might be more common if this generation had been trained in breathing properly, in placing the voice, in talking through the throat instead of in it, and in using the various sounding boards of the head, thereby producing a sound of resonant, musical quality, which should be the rightful attribute of every individual.

It is the privilege of the artist to paint a picture and the sculptor to model a statue, but it is within the possibility of everyone to be a living, breathing picture or statue, expressive of beauty in proportion to the demonstration of true being.

What is more beautiful than that freedom and self-possession which comes from a knowledge of self and its environment. On the contrary self consciousness is always born of such negative qualities as ignorance, fear and vanity, and any educational system that engenders it is in error.

All sense training is primarily physical training. As the senses are the avenues through which thoughts of external objects are conveyed to the mind, the eye, ear, hand, etc., being the organs used, specially require such training as will enable them to properly fulfill their functions.

It is frequently asserted, and it may be true, that the eye has received more training than any other sense organ, but it is also true that the eye has been poorly trained. This is proven by the fact that so few people, even those who claim the fullness of the prevailing education, are able to draw, and it is frequently ludicrous to observe educators, especially those prominent in experimental psychology, giving advice as to methods of teaching drawing, when they themselves cannot draw, and see with eyes that are only half trained.

It has often been truthfully said that the draftsman never sees more than he draws, and never draws more than he sees.

Pictorial drawing, which is the expression of the appearance of objects, is dependent upon two things—seeing and doing—the latter being the mechanical manipulation of the tools involved and the discipline of the hand, what is commonly understood as Manual Training. Of seeing, we may say there are two stages—recognition and analysis. To recognize is common to all, even the lower animals, but to analyze, which brings with it the power of imagining, and is the foundation of expression, is the result either of a natural tendency sometimes called genius, or of special sense training.

The eye really only sees color, it being conscious of the form of the object only in so far as it is apparent as the boundary of the mass of the color seen. For instance, the eye sees the shape of the Greek vase as the result of the outline or limitation of its mass of terra cotta color against the gray wall. Again, the eye is conscious of the form when it sees the different faces of the object in light or in shadow. A cube may be placed at an angle of forty-five degrees and yet so lighted as to entirely lose to the eye the edges which divide its surface and making it appear as a plane.

That the eye only sees color is proven by the fact that the painter can represent the external world by means of color alone, and the fact that the mind can grasp form without the use of the eyes is proven by the works of the blind sculptor, who gains his knowledge of form entirely through his hand.

Form concepts are sometimes the result of a thought which combines the knowledge acquired through seeing and handling, then again they may be acquired exclusively through the eye, whereby all that is visible of the object is seen from one point of view, giving us the picture of the appearance of the object, or as it looks. It is then very apparent that form must be apprehended from two considerations, and that parallel with the prevailing method of analyzing the actual facts of the object, wherein we learn the number and kinds of surfaces, faces, edges and corners, we should also learn how these faces, edges and corners appear to the eye under different conditions. For example we know that a cube has six faces, but we should also know that we can never see more than three at a time, while we may so hold it as to see only two, or again only one. We know that its faces are square, but the eye rarely sees them square, for seeing them at an angle, either facing or turned, they appear as irregular four-sided figures which resemble oblongs, rhombs, rhomboids, etc.

It is owing to training or the lack of it, whereby a person is enabled to so easily model a cube or make one from paper, though he finds it almost impossible to draw one, which means to express its appearance or what the eye sees.

To successfully carry on this line of eye-training it is necessary to place in the hands of each child carefully selected related objects, and to conduct the exercises systematically and with a method that progresses from simple to complex objects as the child advances from the primary to the grammar grades.

All education should embrace the accumulation of knowledge from the objective world and from literature; the formation of taste, from an appreciation of beauty, subjective and objective, in the realm of nature and the realm of art; and the art of doing, which should include all thought expressions by means of the body, as in carriage, poise and gesture; by means of the voice, as in speaking and singing, and by means of the hand, as in writing, drawing, modeling, making, etc. This education may be derived from three sources—from the study of science, of literature and of art.

The success of the past educational systems and methods, to which we ourselves have been subjected, may be measured by the degree of our ability to meet the demands made upon us by the present requirements of life.

Much attention and thought have been given to science and literature, but art in general educational systems is almost unknown.

Not to know a scientific truth or have standards in literature would be a source of disgrace which any fairly educated person would be loth to admit, but even among our college and university professors, not to speak of others less favored educationally, do we find many who unblushingly confess that they know nothing about art.

Why should we have a knowledge of art? Of what value is it to any individual? What part does it play in the formation of character, or in adding to our happiness or usefulness to ourselves or the world at large?

Let us consider this subject and see whether there is anything worthy of our serious thought, or whether it is only a plaything for the amusement of the idle and the sentimental.

"Art" according to Froebel "is the visible expression of the invisible spirit of man," or as Delsarte said, "Art is feeling passed through thought and fixed in form," or as another writer says, "Art is the flowering of man's spiritual nature."

Art in its broadest sense compasses all expressions of mankind including Architecture, Sculpture, Painting and Literature. Those which contribute to our needs and comforts, whose purpose is utility, we classify as the Industrial Arts, while those that administer to our delight and express only beauty we class as the Fine Arts.

It is a lamentable fact, that in this country, with a very few exceptions, the Fine Arts have been only for the wealthy. However, it is to be hoped that as our nation grows older, our people may have the advantages of public museums and art galleries similar to those which have been such an important factor in Art education in the Old World. Possibly it is owing to the fact that "we do not miss things we know not of," that makes us as a people so indifferent to education in this direction.

The Industrial Arts we always have about us. We cannot live without them. We must have houses, furniture, crockery, clothing, etc., and it is a question as to whether these useful things are to be beautiful or whether they are to violate every principle of art.

The question then naturally arises: What constitutes Art Principles? To reply to this we will say:

First.—The object made must have a lasting increasing interest. The things that have come down to us as classic. The rich inheritance of past ages, such as Greek architecture and sculptures. The Renaisance Paintings, the great Oratories and Symphonies and the great masterpieces of Literature of all times, never cease to have a charm, but constantly reveal new beauties as we get better acquainted with them. Indeed, it may be said that the first impression of a great work may be disappointing even to the observer of good taste, for the subtleties of art reveal themselves only to the appreciative eye, or as one writer puts it, "a work of genius demands an answering genius in the beholder."

Second—The object must be made of a material adapted to its use and of a form, not only consistent with its use, but embodying the principles of beauty. This naturally condemns such products as vases made to imitate a hand holding a corncob, or a lady's slipper, or a candy box in the form of an old shoe, or a butter dish in the form of a head of cabbage, or a salt-cellar in the form of an owl, or a match-holder as a coal hod, or a card receiver as a tub, or a brush and comb box as a log of wood, or a horse made of prunes.

It is well to know that such articles as a tub, a coal hod, a shoe, etc., are things having forms especially adapted to their use and are wholly out of place for any other purpose or as æsthetic expressions.

Third—The object must be truthful, never pretend to be what it is not. This again condemns all imitation, such as putting a marble front to a brick house, or making an earthen jar to imitate a wicker basket, or making wall paper look like tapestry, leather or satin, and making oilcloth look like tiling or inlaid woods, for each material has beauties of its own, which should be respected and not be defaced with some other material, as the painting of beautiful woods and the gilding of iron, etc.

Everything that man makes to supply a want, either practical or æsthetic, must first originate in his thought, and the design that expresses it may be dignified and refined, expressing beauty in its constructive features as well as in its ornamentation, or it may be capricious and vulgar pandering to the love of novelty and display and administering to his lower sensibilities.

When the constructive design, or the general form of an object does not satisfy the eye, and the workman is unable to remedy the defect, he very naturally tries to conceal it, and does so by adding decorations, thereby aiming to divert the attention of the observer from the general effect of the whole to the detail. This is probably the reason we have such an abundance of superfluous decoration, for generally the artisan that has sufficient knowledge to make a good constructive design rarely spoils it by over-decoration.

Another reason for over-ornamentation is the love of embellishment that is innate in the human family. We aim to beautify the things we like, but the quality of the decoration must largely depend upon our idea of beauty.

Beauty, as a rule, is a relative term, each person's standards being graded according to his perception and appreciation of generally accepted standards. For instance, the savage and the child enjoy strong contrasts of form and color, which the man of culture would reject with ridicule.

The hand-organ and Italian band will entice a crowd of street gamins, while the lover of music will close the windows and retire to the inner chamber to escape the din of the noise.

One man will burn the midnight oil in the intoxication of a dime novel which another would not be seen reading.

How much have we in the Industrial Arts which rank with the trashy music and literature?

Think of our houses; as a rule there is much building, but very little architecture. And then examine the furnishings. Too often the patterns of carpets and wall papers, of hangings and upholsteries are so strong in form and color that there is a warfare that is more violent than the brass band on the street, a condition that cannot help but be a disturbing element, conscious or unconscious in the minds of the occupants, for every form, color and sound in the cause of a condition of thought produced by the sense impression we receive of it.

Into every article that is made enter three things—the material, the skilled labor and the beauty it expresses, but of the three elements the last fixes its value, for the conception of beauty is rarer than either of the others. Taste and skill combined can convert the cheapest and most commonplace material into the most valuable product, or as has been said, "touch a piece of clay with imagination and it turns to gold."

The world is full of products made of valuable materials and by skilled hands, but of bad design, and hence these products are almost valueless, whereas the few things all through the ages, that express beauty, have found their way into museums, where they are fully valued and appreciated. Does this not prove that the æsthetic is the practical, that beauty has a commercial value, and he who would succeed in the arts must know beauty, for art is the expression of beauty.

Every system of education which aims to train the hand to skilled labor, must have as its foundation, an art training, thereby enabling the workman not only to skillfully make an object, but also to have a thought to express worthy of the labor expended upon it.

Art training embraces two lines of work, the educational and the technical, of which the latter must include the former, but the educational may exist without the technical and be of great value. Many of the great critics were unskilled in the technical. Everybody can learn enough of this to be of practical value, but skilled technical work, making the specialist and expert is the privelege of the few, while educational art, which is of great value, is within the possibility of all.

To have standards whereby to judge of the value of things is a source of the greatest satisfaction. To know, to analyze, criticize and classify any product without consulting guide books or critics is conscious power, while the sense enjoyment that comes from an appreciation of the beautiful surpasses all other pleasure.

It is also of value from a practical point of view, being a source of economy in the expenditure of money, for knowing the value of things, we never pay more than they are worth, and having standards we buy things that are good and lasting. We will not be slaves to the changes of fashion, for knowing what is good, we will not be dictated to, but we will aim to express our own individual ideas and be content to let the blind follow their leader.

Art education may be derived from two sources; first from literature, including philosophy and history, whereby we reason out things and learn what other men enjoy and what the critics think; and secondly, that which we get by coming into contact with beautiful things and learning to perceive and analyze their beauty. The latter we call sense training, whereas the former is intellectual training and is apt to prevail on account of the lack of good examples of art within the reach of the student.

It is quite common to find people very familiar with the history and philosophy of art, who are utterly unable to judge of a new product that has not been reviewed, because the taste has never been educated.

Any system of art education should aim to cultivate the taste, and this must be done by bringing to the student all the illustrations of industrial and fine arts that are within the limitations of their finances. It is far better to appreciate the beauty of a Greek vase with its refined decoration than to know much that has been written about the great masterpieces, for the former has in it a love that will generate a desire to see more, which may grow into the appreciation of greater things.

Manual Training or hand culture, which implies the art of manipulating materials and of using their related tools, or of giving expression to ideas of form by making, must begin in the Kindergarten and progress through the Primary Grades, with such exercises as modeling in clay, paper folding and cutting, drawing, sewing and the making of objects from paper, cloth and wood, and culminating in the Grammar Grades in sloyd-carpentry and iron work; but it is a great mistake to substitute for the whole subject, separate features such as sloyd or carpentry, each of which is excellent as a link in the educational chain, but when taught to the exclusion of Art Training and all else, is apt to develop into special technical training, the products of which, as a rule, are heavy, clumsy, of bad proportion and generally over-decorated with bad paterns.

A knowledge and appreciation of accepted art standards, or the formation of taste, must be a most important factor in any industrial training, in order that the product of scientific and skilled workmanship may express a noble and worthy thought.

The world is full of skilled mechanics in all lines of work—builders, decorators and furnishers, tailors, dress-makers, milliners and jewelers, but the artist in any of these lines is rare.

To get a good thing is sometimes the reward of much hunting, while our shops are filled with ugly useless things. This condition is not owing to a lack of talent, but of training, for the American people are credited with naturally having much originality and taste, and only as a rule, needing a suggestion to catch a thought. If this is true, and we hope it is, we, with our energy and ability might, with Art Education established on a permanent basis in our public schools, look for a national art greater than that given to the world by any other people.

MANUAL TRAINING

PROF. KENYON

The term manual training is loosely applied to several systems and fragmants of systems, and a great amount of isolated device; and under the head of manual training schools are classed a variety of institutions each covering a legitimate field but following diverse methods and governed by aims greatly at variance. Sothat, to be properly understood, one must explain the standpoint from which he regards the subject. I can best do this by eliminating those systems and institutions which, in view of their aims and methods, cannot be included in the term.

First of all the trade school, a thriving feature of many American cities and of special institutions such as Hampton and Carlyle, is not a manual training school. It is clearly a specializing school, and as such is a sequel to the other.

The industrial school is another which must not be included here. The industrial school is a sort of premature trade school in which half-grown children are initiated in the various bread-winning pursuits. Its best claim to recognition is its superiority to the reform school as the guardian of uncalloused youth. The industrial school is like the trade school, missionary in its spirit, economic in its purposes and wholly good in its legitimate field; but it is not, in a strict sense, a manual training school.

Other so-called forms of manual training are the numerous fads which from time to time capture the curriculum in various schools and localities. These amusements range everywhere from Kensington painting to primary-class wood carving, and in view of their frequent recurrence it is with some degree of justice that the newspapers cry "fad" at every innovation without stopping to examine.

THE MOTIVE.

The certain tests of manual training are the method of its application and the motive governing the method. The motive is by no means revealed in the name; indeed, so meager is the latter in its suggestion that various hopeful attempts have been made to increase its descriptiveness. Hence "manumental" found its birth in the cerebral belongings of Mr. J. Clell Witter, of Art Education; and Mr. Larson, I think, the Boston sloyd man, inscribes on his banner, "Heart, Head and Hand," which goes a step further in its suggestiveness. But if the hyphen enters the title of our subject we must not stop until we have said Manu-mental-moral-ethical-spiritual training, for the system we seek has all of these bearings, and no one more than another. And it is high time to put away that distinction between manual training and the older members of the curriculum by calling the latter "culture" studies. If manual training is not a culture study it is nothing. If our ancestry had not for uncounted centuries engaged in manual training through force of circumstances, we of to-day would have precious little basis for our culture. After all it is a hard matter to find a suitable name. Probably the surer way is to adhere, in our methods, so tenaciously to our ideals that the subject will come to characterize the name.

SENSE CULTURE.

Psychologically, manual training must be included under the broader term of sense culture. We know of a little hermit who lives in a round castle. The castle is in the center of a circular garden. None have ever seen the hermit and he sees no one. He has six faithful servants who bring him food from beyond the garden walls and who carry back his acknowledgements therefor. If one of these servants should fall sick or be clapped into prison by the giants of the exterior — a thing which often happens—the others would work harder and nearly, if not quite, fill the gap. Indeed, so keen are they at their peculiar business that though as many as two turned up missing a third would shoulder their work and succeed in a wonderful way at the triple task, as in the case of Helen Keller. The little hermit is absolutely at the mercy of his servants. If they lack discrimination in selecting his food he must resort to his store of fat, as does the camel in the desert. If they should desert in a body the hermit would die.

The chief of these servants, that one having a greater working power than all the rest combined, is the Sense of Touch. And, strange as it may seem, he, of all of them, is least taken into account by the friends of the little hermit, Ego. While his undersized fellows are overburdened with ill-proportioned loads, he has to dodge around and help them in a surreptitious sort of way, as if he had no real right to exist. It is one of the aims of manual training to dignify this greatest servant of them all and give him an effective station.

All the servants obtain their loads by the act called sense preception; and when the act is performed under the personal attention of the Ego, it is called observation. The material they bring in is sorted and arranged by the hermit and stored in the garden surrounding the Castle of Consciousness, ready for future use. He is constantly reconstructing this stored material in forms that suit his own fancy and sending them back to the great exterior in the vehicles ridden by his servants: and this part of his work is called expression. These complementary processes, observation and expression are absolutely the only means of communication between the little hermit and the world. Suppose the Giants of the Exterior were to capture that robust and all useful carrier, the Sense of Touch, and bind him fast or chastise him for his efforts, it can be readily seen how poorly the little hermit would fare, thus deprived of his ablest help.

It must be borne in mind that these reciprocal processes of observation and expression have been busily in progress ever since Ego took charge of his castle. If they had not the hermit would not know how to receive the offerings of his servants, nor where to store them in the garden. Nor would he know how to make re-combinations which to send back to the exterior. So it has been the peculiar business of the six servants to keep their little master exceedingly busy from the very outset, thereby growing keener themselves. And it is owing to this close allegiance that the hermit is so well able to govern his castle and is so wonderfully familiar with the countless stores of the garden.

THE' FORMALIST.

Now, it is held by such eminent formalists as Dr. Wm. T. Harris that the Sense of Touch completes his labors by the time the hermit gets to be six or seven years of age and that, subsequent to that time, there is really nothing for this faithful helper to do but to don his Sunday garments and pose as a sort of past grand assistant, holding strictly aloof from the labors of his former associates, although they constantly entreat his support. In this connection, however, it is understood that the Sense of Touch will backslide to his former habit and get in a good deal of work on unofficial occasions.

The ground of these formalists must be that by the seventh year the combined efforts of the servants have so filled the garden with raw material that it is quite useless to add further to the store; and that the hermit may now dispense with his servants so far as they act as collectors and devote his time exclusively to sorting and refining his possessions already in the garden. In other words, it would appear that at the child's entrance to school he arrives at a period of his growth when the previous sense-action may be discontinued and henceforth concentrated entirely upon symbols whose sole office is to produce a readjustment of materials already in sub-consciousness. Or, to say this still more briefly, the child at six years of age possesses an accrued stock of concept elements sufficient for the stock material of a most mature education. Further, he has at this time acquired a power in judgment and inference which justifies his being launched at once and forever into a world of abstract thought.

It is not within the scope of this paper to contrast further these opposing views. But the fact should remain before us that any system of education that countenances sense culture in any form must receive manual training as involving the chief two senses, touch and sight.

SCHOOL ROOM VALUES.

From the pedagogical standpoint manual training means an economy of study. It has been demonstrated that a boy accomplishes more scholastic work by giving a period of the programme to workshop practice. Furthermore, the latter makes him love school where he previously regarded it as a prison house. It affords a bond between the home and the school, an achievement much to be desired. It has a hygienic value beyond the mere question of physical exercise, in that it relieves over-taxed channels of attention. That is to say, the individual generates 100 per cent. of energy. For its outflow nature provides the six channels of sense. The conditions of the ordinary recitation demand that the conducting capacity of these six shall be vouchsafed by one alone—sometimes hearing, sometimes sight, rarely both. Under these conditions nature asserts herself. There is an overflow of energy. It is manifested in the manufacture of spit-balls, the whittling of desk covers and a hundred other forms of disorder and inattention. We say the boy is bad, but the physiological fact is that the single channel has been overtaxed beyond endurance, and the others must act though the pupil die for it. We ourselves know how it fatigues us to listen to a discourse. We know it tires us less if the talk is illustrated by pictures. Our fatigue would be still less could we handle the material talked of and taste it, smell it and move around it. In short that study permits the most normal action in which the external object is apprehended by all the faculties in unison, each sense and each muscle expending its own share of energy. Manual training is a long step in the direction of normal study.

A BALANCE

Manual training is an arbiter between diffidence and vanity. It reveals to the "dull" pupil that, after all, he is not entirely dull, and the unfriendly world grows bright to him with a new hope. The bright pupil has over-ridden his school-room problems on a winged steed whose flight is toward arrogance and conceit. In the manual training room he finds that, after all, the world is large and he is small. He meets a hundred hard, relentless problems whose honeys are extracted only by noble, humble work. And the manual training reorganizes both these pupils and bestows upon them that best gift a school can give a child—a correct estimate of the world in its relation to him.

STATUS OF LABOR.

There is a social side to manual training. That force which has since the beginning of human time, slowly upraised the height upon which man stands to-day is plain, rough, manual labor. It founded his temples, it reared his ideals, it evolved his intellect. The human hand has been the life-tutor of the human mind. And to-day we despise manual labor. Hardly one of us here but would rather earn his bread at any so-called profession than at a good, honest trade, though he starved by the choice. Our social conditions have degraded the laborer beyond the reach of culture (?); and we are short-sighted enough to ascribe the degradation to labor itself. The maker of the human mind lies low, spurned by its pupil! And woe to that pupil were no help at hand. The general remedy is the common school. The sure specific is manual training.

GROWTH OF THE IDEA.

Historically, manual training is not new. Almost two centuries ago, in the schools of Halle, Germany, a fully developed system of manual work had won itself a place. And in far-away Finland, in the Normal Schools established by the great Cygnaeus, manual training was taught at a date when our own country was yet considering the advisability of establishing Normal Schools.

Dr. Saloman credits Martin Luther with the first utterance which may be construed as a manual-training argument. In a letter to the German burgomasters Luther advised that schoolboys study less of Latin grammar and devote a portion of the time so saved to the learning of the trades for which they were destined.

Montaigne, late in the sixteenth century, declared: "It is not a soul, it is not a body, to be educated; it is a man." We find this thought indorsed by our own Prof. Woodward in his famous sentence: "Put the whole boy to school."

Comenius, born in the year Montaigne died, has been styled "Father of the New Education." He argued strongly for manual labor in the school "if only to give the pupil an insight into the actualities of life." That is, I take it, Comenius believed manual training to be, in one of its aspects, original research in sociology. He thought it to be a good means, also, of ascertaining the pupil's natural inclinations.

John Locke, in treating the education of a nobleman, recommended that he learn a trade—two or three, preferably, but at least one. Locke argued that this feature of a young gentleman's education would give him a desirable skill, physical health, provide him diversion, and, not the least consideration, keep him out of mischief.

Franke, in Germany, was the first to develop an adequate manual training course in a child school. Heretofore we have heard arguments for trade teaching from various standpoints. But in Franke's work in the schools of Halle we find the distinctive idea of manual training. As early as 1701 he employed a special teacher in knitting. Other occupations tried later were the various offices of housewifery, such as meat-carving, apple-peeling and button-sewing, although the pupils were boys.

It appears as a remarkable fact that while the boys of the poorer class received their manual training in these curious forms, those of wealthier parentage, in attendance at a separate institution, were given such work as carpentry, turnery and the construction of physics apparatus.

A few quotations from Rousseau will show how fully he appreciates the nice distinctions between manual training and trade teaching. He says of drawing, "I wish my pupil to cultivate this art, not so much for the art itself as for the acquirement of a keen eye and a supple hand. In general, it is of less importance that he learns particular exercises than that he acquires that fineness of the senses which may be gained from the exercise. * * * His hands will be busy to the improvement of his understanding; he will become a philosopher when he thinks himself only an artisan. * * * Instead of dilating on abstract morals turn his whole attention to the industries which make man useful to man * * * Lower yourself to the status of the artisan in order to be above your own. * * * It is not necessary that one practice all the trades in order to honor them all. It suffices that he finds none whose dignity is below that of his own. * * * Our ambition is not so much to learn the art of joinery as to elevate ourselves to the standard of the joiner."

Various reformers follow reinforcing rather than adding to the doctrines quoted above. Then Pestalozzi comes, developing furthor the tenets of Comenius, and finally Froebel stands forth. thrusting aside much vagueness of theory, enunciating truths which have hardly yet begun to unfold and applying device which in a great degree expresses his theory of sense culture, through which the human trinity, the physical, the intellectual and the spiritual beings are co-educated.

Tracing the growth of the idea, then, we have first a demand that trade-teaching be introduced as partially displacing Latin grammar. Later, strong expressions for a general sense education, in which manual training finds a large place but is accorded no direct consideration. Finally, in the great Froebel, a theory and practice which embody a pure conception of the nature of educative manual work.

In connection with the development of the manual-training idea, these three maxims should become historic:

Away back in the seventeenth century Comenius said:—

Learn to do by doing.

In 1892 Prof. John Dewey said:—

Learn to know by doing.

And to-day the philosophy of manual training says:—

Learn to be by doing.

MODERN TENDENCIES.

In conclusion there are three phases of the modern tendency to be considered. It is to be regretted that the chief of these is utilitarianism. The people are clamoring for studies that are "practical." "Give my boy something 'practical'! You, teacher of the child school, give my boy bookkeeping and fancy penmanship and give my girl typewriting. Transform your later kindergarten into an apprentice shop. Make our children assured 'bread-winners.'" That is the cry. And our profession bows in obedience to it. It seems not sufficient that the trade school be an established institution in itself, but its characteristics must pervade the formative period in the lower school. Hence we have "industrial" studies and bread-winning occupations jostling elbows with the legitimate members of the lower school course of study. Half the advocates of manual training indorse it because they see its utilitarian value and nothing beyond.

Next there is Formalism, a tendency not for manual training but against it. The formalist of to-day is the same formalist that Luther opposed, and Rabelais, and Locke, and Bacon, and Rousseau and Froebel. His never-changing doctrine credits inheritance with those gifts that must otherwise come through sense culture, and he devotes the school processes first, last and always to scholastic lines of work. Fortunately his views are at extreme variance with those of the utilitarian, and this leaves an ample middle ground for the third tendency, Realism. The latter draws the educating force from the individual's total environment. In this spherical surrounding, both human nature and the irrational world find place. Nature itself is recognized as the entity comprehending humanity as one of its members. And while the latter phase receives its due consideration through the study of history and literature the others are represented in laboratory science and the mechanic arts of the manual training department. It is not here implied that manual training is unrelated to history and literature.

The modern system of manual training may be considered in the three periods of kindergarten, middle school and secondary school. Of these the first is the best established. The kindergarten idea has more nearly outgrown the experimental stage than the manual training of the other two periods. The high school workshop is also upon a splendid footing. Throughout America the city schools are arranging well-equipped workshops and well-organized courses of work. And in this connection the universal verdict is that this latest member of the curriculum, so far from crowding the programme, more than pays for the time allotted by making the high school boys better members of the school society and more earnest and effective students. The high school manual training has been for many years an established institution and an assured success.

The period needing most careful attention at this time is that of the middle school, including the primary and grammar grades. In many parts of the country, especially in Boston and its environs, well-adapted courses of work are already established for the middle school. The Swedish sloyd, or a modification of it, is the usual form. The sloyd system is rapidly taking hold elsewhere. It would be safe to say that there were as many as sixty separate sloyd exhibits in the educational department at the Columbian Exposition.

EXISTING SYSTEMS.

There are three systems of manual training now in actual operation in American schools. One is the modified Swedish sloyd already mentioned, which is peculiarly adapted to the middle school. Another is the Russian system, which, with some modifications, is the standard manual training of the American high schools. The third, adapted to all periods, from the kindergarten up, and destined without doubt to be the manual training of the future, is Illustrative Construction. It is the only form in which handwork can become an integral part of unified study. It will sooner or later depose the other forms of workshop practice. The Russian system is having its gala day, the sloyd is even now carrying our schools by storm. They are both good, but they will by-and-by pass away and illustrative construction, absorbing what is good from these systems, will be the manual training throughout the formative period.

Following the discussion of these papers, by Prof. Keyes and others, the Chair was instructed by the Association to appoint a committee of seven to investigate the conditions prevailing in the common schools of California, so far as relates to school work in manual training, and to report through the medium of the Pacific School Journal, what, in their judgment, is the most feasible plan of introducing or increasing the manual training work in the public schools.

The President appointed the following as members of this committee: Prof. C. H. Keyes, Pasadena; Prof. Walter Kenyon, Stockton; Prof. J. Addicott, San Jose; Prof. P. W. Search, Los Angeles; Prof. Bush, San Francisco; Prof. Earl Barnes, Palo Alto; Superintendent S. T. Black, Sacramento.

Friday Afternoon

Association called to order at 2 o'clock.

The Treasurers Report being called for was submitted and adopted, as follows:

SAN FRANCISCO, December 23, 1894.

President Geo. R. Kleeberger, California Teachers' Association:

DEAR SIR:—On account of pressure of work preliminary to the opening of our institution, I have to write that it will be impossible for me to attend the meeting at Santa Cruz. My account-book and vouchers will be handed to you by Miss K. M. Ball, and I presume that all the accounts and business transactions will be clear to you and to the Executive Committee.

For two items of expenditure there are no vouchers. One of them is for $100 for salary of Secretary, as voted by the Association at Stockton. The other is a $5 item, referring to certain membership fees that were paid in stamps. The amount was put down among the other membership fees as "cash paid in," and since the stamps themselves were used by the Secretary, they had to be put down also as "cash paid out."

I would call your attention to the fact that during the past two years the expenditures of the Association have increased at a greater rate than the income. Thus:—

In 1892 the receipts were	$524 00
In 1892 the expenses were	367 90
Balance	$156 10
In 1893 the receipts were	$696 85
In 1893 the expenses were	526 85
Balance	$170 00
In 1894 the receipts were	$867 25
In 1894 the expenses were	791 71
Balance	$ 75 54

The above receipts for each year include the balance from the year preceding. Subtracting $156 10 from $170 shows a gain of $13 90 during 1893—a gain to be sure, but less than the increase of the preceding year. For the year 1894 there has been an actual falling off of $94 46 in our surplus, due to the following causes:

1.—For salaries of Secretaries the total expense was $110, or about $50 more than for the year 1893.

2.—The attendance at the Stockton meeting was less than the Fresno enrollment by about eighty members.

3.—The volume of proceedings cost about $380 for printing and mailing. This item was reduced, however, by the receipts from advertisements, which amounted to $99 paid in, and $32.50, which I have not yet received.

The amounts due from advertisements are as follows:—

J. A. Stewart, Stockton,	$5 00
Edw. T. Cook, Los Angeles,	10 00
Jones' Book Store, Los Angeles,	7 50
P. M. Fisher, Oakland,	10 00
	$32 50

The first three were left in the hands of Sec'y Greely for collection and it is probable that he will make a report concerning them.

I do not know what demands are still outstanding for postage, &c., but if they are not large, and if the attendance at Santa Cruz should be equal to that of preceeding years, say 400 or 500, it would be safe to publish the proceedings. Otherwise this subject will be one for serious consideration by the Executive Committee, and by the Association. Yours very truly,

GEO. A. MERRILL,
Treasurer.

On motion $100 was set aside for salaries of secretaries.

The subject for the afternoon being "Difficulties in the Way of Applying the Ideal Curriculum, and Employing the Competent Teacher," papers were read by Superintendent J. W. Linscott, of Santa Cruz, and Superintendent A. B. Coffey, of Sutter County.

FIRST PAPER.

MR. LINSCOTT.

In accordance with our programme, this afternoon is devoted to a discussion by the County and City Superintendents of the State, of the Difficulties in the Way of Applying the Ideal Curriculum, and Employing the Competent Teacher.

We have listened with much interest to the able discussions upon "The School Curriculum" and "The Teaching Force" during previous sessions of this meeting.

I am certain that I speak for my fellow Superintendents when I say that we feel that no subject is of such vital importance to our educational work of to-day, as that of the working out of a course of study which shall outline, at least, the best and most advanced thought of the time, shall tend toward the uplifting of our schools to a higher plane, unify our work, bring better results for the amount of time and money expended, and which shall be practical in its application to our necessities and our conditions.

We cannot bring about the desired results in a day, nor in a single year, but we can begin and carefully and slowly work out the great problem—at least do our part in its solution.

The most hopeful sign of better things is seen in the interest which is being taken by those who are engaged in higher educational work, in the attempt to bring about a better state of affairs in the development of mind along the best lines, starting from the earliest period and moving onward through all the years of its growth.

Much time has been, and is now being given to the preparation of a curriculum for our High Schools, which shall prepare students for better work in the higher institutions of learning. This is well. But when we shall unite our efforts upon the providing such a curriculum for our elementary schools as shall take the child when he first enters school, and develop him physically, intellectually and morally, the major portion of the problem is solved, and the secondary schools of the future will, in a great measure, take care of themselves.

The Universities find themselves hampered because of lack of proper training in the preparatory schools—training in the development of the powers of observation, thought and expression.

The High Schools find that the pupils who come to them from the Grammar Schools have not been properly disciplined, and so on down the line. We must begin at the foundation if we ever hope to reach a permanent solution.

Representing the Primary and the Grammar Schools of California, we are glad to join hands with the High Schools, the Normal Schools and the Universities in beginning a work which has the promise of much good.

We must, in supplying a curriculum for our elementary schools, consider the necessities of our country schools as well as those of our cities.

I have no patience with that person, be he teacher or patron, who says that as good work is not required, or cannot be done in the small country school situated on the hillside, as in the one situated in the large city. It is being done in many cases to-day.

No State in the Union has made such munificent provisions for the support of the schools, both urban and rural, as has California. Under our law the State and County school moneys are so apportioned that many of our country districts get a larger proportion than they would receive if that apportionment was based upon population, number of census children, or valuation of property.

As a result of this wise provision of our law, which I believe is eminently wise and just, no State has better country schools than has California. Because of the support given them, they can and should provide the very best elementary instruction for their children.

I believe that the same general course of study should be followed in our elementary schools, President Eliot to the contrary notwithstanding. I refer to his address before the National Association of 1892, though the report of the Committee of Ten negatives that opinion. I believe that our pupils from the age of six to fourteen should be so taught that the foundation of the after-structure shall be laid upon the same general plan and formed of the same material, no matter what differentiations may take place afterwards—no matter whether the child's school life is to end with the grammar school or whether he is to take advantage of the many elective courses provided in our secondary schools, our technical schools and our universities.

I would not have a course so rigid and inflexible as not to allow individual independence to the faithful teacher as to ways and means in obtaining desired results. But I believe that he should work along the best known and well approved lines toward the development of all his pupils, and that this development should be along the same general lines during the years mentioned above.

I do not believe that we have the right to say what studies are suited to any particular child during his elementary school life. The dunce of the class at the age of eight may be its genius at thirteen. I thoroughly believe in child-study. But this study should be, not for the purpose of finding out what he is to do in after life, but what he is to be; for the purpose of ascertaining his weaknesses, morally, mentally and physically, and then, by proper restraint and stimulation, develop the well-rounded youth. I do not want any man or woman to determine what my boy is fitted to become, or what he is capable of learning, before he leaves the grammar school.

Child-nature is the same wherever we may find it. It may be abnormally developed in one direction, or entirely uncultivated in another; but still it is the same, influenced and controlled by the same powers of evil and of good. Peculiarities caused by heredity, environment, etc., exist, and must be properly met and studied. But the training that will develop all the powers of your boy will develop those of mine. There must be modifications to suit particular cases, but the general plan must be the same.

What is needed, then, is that we take a broad outlook of our great commonwealth, and provide such a curriculum as shall be applicable to all our elementary schools from Del Norte to San Diego.

It is not enough for us to indulge in generalities; to say that too much time is being given to this or to that study; that the subject matter in different lines must be abridged. The work must be done. At least a general outline of requirements for our elementary schools must be given.

As Superintendents, representing the elementary schools of this entire State, we ask for help from the combined wisdom and experience of the educational force of the State to supply such a general course of study as shall embody the best principles of pedagogy and shall help us and our teachers to do better work.

It may be that we, who are brought closely into contact with the beginning of things in school life, see some difficulties in the way of applying the ideal curriculum that many of you, who have for years been dealing with more mature minds, do not. Doubtless most of you have had experience, in former years, in similar work to that which is engaging the attention of the great body of the teachers of to-day—the work in the graded and ungraded primary and grammar schools. It may be that some of the conditions which meet the teacher in such schools, some of the difficulties that obstruct the way toward the development of child life, have become mere memories to you. But the difficulties and the conditions of former years still exist, and must be met in a thoughtful and practical way.

No thinking man or woman of the present age can fail to appreciate the grand work which is being done for our youth in our higher institutions of learning. The training of young manhood and young womanhood, in such ways as shall prepare for high and noble life-work, has its difficulties and responsibilities peculiarly its own. But I know that I speak for you all when I say that no one so much needs all the wisdom and the help, both human and divine, that can be given, as that one who has so much to do with the molding of character and life during the early years of childhood.

What are some of the difficulties in the way of applying the ideal curriculum?

First, I would say the lack of well-trained teachers and superintendents who are prepared to carry out the spirit of its provisions wisely and well.

Please to note that I have included Superintendents, both City and County, in my statement.

No one feels more sensibly than I, the need of a better preparation for my work. The necessity for better supervision is as great as that for better teaching. Therefore, remember that what I may say in criticism of the teaching force applies to the Superintendents as well as to the teachers.

And here allow me to say that one very serious drawback to good work on the part of the Superintendent is, that so large a part of his time is taken up with the mere routine clerical office work, that he has not sufficient time to attend to the real duties that appertain to his office.

In discussing this question of the preparation of teachers, I do not wish to be understood as saying ought against the faithful, earnest conscientious work of the great majority of our teachers. No body of toilers are, by their faithful, arduous labor, striving more earnestly to do their duty, nor more surely earning their wages, than are the teachers in our public schools.

But very, very many of them are wearing out their lives in the mere drudgery part of the work, under a system which brings much useless toil to them, and which does not bring commensurate results.

How many of the new teachers, who will take their places in our schools throughout the State at the commencement of next term, are really prepared for the responsible position which they are to fill?

They have the certificates or the diplomas, and these are necessary requirements; but the holding of these documents does not make the teacher, though this seems to be the idea of many.

Are they prepared, by study or by training, to find out the very best that is in that boy of yours, and, by the exercise of wisdom, judgment, skill and tact, to lead him along such paths as shall develop that best?

A pupil graduates from the High School, takes a few weeks for a general brushing up in the elementary subjects, comes before the Board of Education, receives a certificate, and is now a full-fledged applicant for a school.

By the aid of the influence of friends, or otherwise, she receives an appointment as a teacher in the fourth grade in the city, or in a country school composed of pupils of many grades from the first year to the ninth.

Her knowledge of methods has come from a cursory reading of some text-book on the subject, that she might be able to answer the questions in the examination; and from the absorption, in a greater or less degree, of the methods employed by her teachers in imparting knowledge during the latter years of her school life.

Better would it be for our schools, were she given a position in the High School, where she might make use of the second-hand experience in teaching the subjects required therein, gathered from the experienced instructors of the past few years, than that she be placed in charge of forty or fifty primary pupils, with no real thought of the vast responsibility placed upon her, and no preparation for the work of molding character and developing child-life at this most impressionable age, except, it may be, the memory of how she was taught in the primary school of fifteen years ago.

But there are many cases even worse than this. Many of our applicants for teachers' certificates have not had the broadening, strengenthing culture which comes from the three or four years' earnest work of the high school.

They come from the grammar school, and with perhaps a few months stuffing under the direction of a special teacher, are able to pass the required examination, get their certificates, and then—

Have I drawn too strong a picture? You know that I have not. You know that our schools throughout the length and breadth of our land are being filled with these unprepared teachers.

Many of those who have entered the profession in a similar manner to that described above, are among the best and most successful teachers in our schools to-day. They had as a very important element of success a natural aptitude for the work. They loved teaching for its own sake. They have been, and still are studying without ceasing that they may be better prepared for their high calling.

By reading, by visiting good schools, and by coming in contact with strong men and women in educational gatherings, they keep pace with the progress of the day, and prove by their work that they are teachers in the true sense of the word.

But there are too many who seem to be fully satisfied when they have reached the summit of their ambition—the securing a certificate and the getting of a school.

This class is not composed wholly of those who have had no special training along pedagogical lines. There are those who come forth from our Normal Schools, who seem to think that when they have secured their diplomas the work of preparation is complete; that said diplomas are passports which should, and will allow them to enter into the promised land of success.

No amount of training will ever make a teacher if the real teacher is not there in the beginning, and if that training has not impressed upon the very being the fact that there must be continual and constant growth in order to secure real success.

There is such a thing as a teacher laying claim to too much, because of the fact that she has had pedagogical training. Some of the greatest failures as teachers, are the possessors of Normal School diplomas.

I do not intend this as a criticism upon the Normal as a training school. I recognize its great worth as an educational factor in our midst. But I do say that I care not what credentials a person may hold, if he rests upon those credentials as a basis of his work, he is not worthy to be a teacher.

In this age of wonderful progress, the first and highest requirement of teachers is that they shall be persistent, untiring students in the direction of their own growth and development.

No other profession contains such possibilities of improvement as ours. No other profession demands from its followers such earnest effort toward improvement.

The second difficulty in the way of applying the ideal curriculum is that of the methods used in imparting instruction. This difficulty arises in part as a result of the untrained teachers, but not entirely.

Old methods which belong to bygone days remain with us; customs handed down from past generations influence us; new-fangled notions, so called, are criticised by Trustees and parents; and we are apt to move on in the same grooves, even when we know better.

We find that the mechanical methods of teaching are the easier, because it takes labor and study to break away from the customary ways in which school has been kept by former teachers, and a departure from these ways will incur the displeasure of many patrons who believe that no ways are like the old ways. It is easier for the teacher to set her pupils to memorizing the dry facts in Geography, page after page, and then, with text-book in hand, ask the stereotyped questions contained therein, than it is to instruct the children how to glean the useful knowledge, and make the study a pleasure instead of a task.

When we think of the teacher who has forty or fifty pupils of many grades, is it any wonder that she takes the easier path, when she knows that the same path has been trod by eminent predecessors.

During the past few years the common school has been almost submerged by the flood of new subjects which has been let loose upon it, and required by law to be taught therein.

The time, which was formerly given to a few studies, must now be divided among the many. The result has too often been, that pupils have been over-worked, teachers overwhelmed with difficulties because of lack of time, and a very superficial work has been accomplished.

The great body of our teachers are attempting to teach the many required subjects, in the same general way in which the few were taught thirty years ago, by making a special place upon their daily program for each and every subject, and for each and every grade.

The cry of the teacher is for time. Class follows class in five or ten minute recitations in rapid succession; recitations are heard at recess, during the noon intermission and after school, and the teacher goes home too weary to make any preparation for the morrow—perhaps, to receive a visit from the Trustee, who tells her that she must try and do better, for Mr. Brown complains that John did not recite in Spelling yesterday, nor in Geography the day before.

In my opinion, no one of the subjects, now required to be taught in our elementary schools, should be omitted from the curriculum. There is no question but that the number and variety of subjects, which are to be opened to children of tender age, are great. But they are all recommended by wise and thoughtful men who have been practical teachers and careful thinkers on educational subjects.

The difficulty comes from the methods employed in presenting these subjects to the pupils. They are not to be taken one by one, and fixed as separate ideas in different nooks of the child's consciousness. They must be correlated and associated one with another by the program and by the actual teaching. This must be done carefully and systematically.

In order to do this, better prepared teachers are an absolute necessity. The average teacher is willing, but she is not now prepared to break away from old customs and ways, and adopt those methods which are necessary to success under a curriculum which is in harmony with the best thought of the age.

When I say that we must have better prepared teachers, I do not mean to imply that they must of necessity be the product of the Training School; but I do say that our teachers must, by constant unremitting effort study to improve the methods now employed in teaching many of the subjects required.

The lack of preparation for each day's work is one of the chief causes of failure in teaching, and the fact that many of our teachers do not make such preparation, is a difficulty in the way of improvement.

Dr. Arnold, being asked why it was that he carefully prepared each day for the morrow's work, when he had been giving instruction in the same subjects to successive classes for years, and must be thoroughly familiar with them, said, "I wish my boys to drink from a running stream and not from a stagnant pool." There are too many stagnant pools in our profession to-day.

In addition to this lack of general and daily preparation which would, in a great measure, produce the skillful teacher, there is a lack of tact in dealing with children on the part of many teachers, which is a difficulty at least as serious as any other.

There is a vast difference between skill and tact in a teacher She may be very skillful in her preparation of a lesson for her class and become completely demoralized in her presentation of that lesson, all because of lack of tact. The teacher must have tact to arouse the dull, interest the inattentive, and must be able to meet promptly all the little things which spring up, and which no amount of skill can prepare for.

The real fact is that some of us who are trying to teach school made a serious mistake in the choosing of our calling.

Another difficulty, which, in my opinion, lies in the way of the application of such a curriculum as shall develop the powers of each and every child, is that the individual teacher has too many pupils under her charge.

In our city schools there are from forty to sixty pupils in a classroom. These pupils are usually classed in one grade; but they might well be divided into several grades, if mental power and activity, physical condition, temperament, etc., are taken into account.

It is utterly impossible for any teacher to give the individual attention necessary to the proper instruction of all the pupils under such circumstances. Thirty pupils should be the maximum number in charge of a teacher.

We often find in the country school fifty children, divided into eight or nine grades. Here the difficulty becomes still greater. Think of the number of recitations that must be heard each day, and tell me how any real individual work can be done.

When the number of pupils exceeds thirty, the teacher must be particularly strong if she can approximate good work.

These crowded rooms, often ill-ventilated and poorly lighted, present a serious obstacle to the proper development of the child.

Other difficulties present themselves which will be discussed by those who follow.

The fact that there are difficulties in the way is no reason why the curriculum should not be applied. The courses of study now in use in the schools of California, both city and county, are not, as far as my knowledge extends, in line with the best thought of the age.

The first difficulty that presents itself in the way of employing the competent teacher has already been discussed. The number of incompetent or unprepared teachers is not small, and as many of these hold credentials equal to those held by the competent and experienced, it is often difficult to make a careful discrimination.

Especially is this true when we take into consideration the fact that the great majority of those who have the power of selection have no fitness for the duty imposed upon them.

Under our democratic form of government, the leading principle is to keep the governing power as near to the people themselves as is possible. Hence we have our divisions into states, counties, cities, towns and school districts, each with its own governing body, having its own prescribed powers and duties.

Theoretically, this is the true principle of government, and for the most part is just and right; but practically, there are cases where it works an injury to the best interests of the people themselves.

One of these cases, in my opinion, is the power given to local Boards of Education or Boards of trustees, as they are now constituted, in the selection of teachers.

In many of our cities politics enters largely into the selection of these Boards, and the will of the people is often expressed by the choosing of men who regard the selection of teachers as a part of the spoils of office and give but little attention to the fitness and capability of the candidates for position.

In our country districts men are chosen who, as a rule, are honest and well-intentioned—men who manage the financial affairs of the district economically, and who desire that their school shall be as good as that of neighboring districts; but men who are incapable of true judgment in the selection of that one who is to be the ruling spirit in the development of the powers of immortal beings—the most important duty given to man to perform.

Many of our local Boards consult the Superintendent in the employment of teachers, and as a result, in such districts you will usually find the best schools. But in the majority of cases the Board makes its own selection, which is too often governed by circumstances which do not tend to a wise choice.

Some say that the place should be given to the applicant who comes first, to the girl who has a mother to support, to the graduate of our own school, to the daughter of a local politician, to a member of our own church. In some cases the question of where the teacher is to board cuts quite a figure in the choice.

It is not alone in the selection of teachers that many local Boards are inefficient, but also in their judgment of what constitutes good work on the part of the teacher when she is employed.

Many a teacher loses her place at the close of the first term because she asserts her independence and breaks away from old methods of instruction and discipline, and is really a teacher rather than a keeper of the school.

There is need of a system of civil service reform in our public schools.

To sum up the whole matter, the great majority of us, teachers and Superintendents alike, are not up to the high standard that should be required for our great work.

I am well aware that the best course of instruction which it is possible to conceive will fail in the hands of a poor or indifferent teacher; and that a superior teacher will accomplish superior results with a poor course of study. But I believe that a course of study, framed in wisdom by those who have given the subject careful thought, and who have ripe experience, will do more to raise the standard of instruction than aught else.

I believe that the great majority of our teachers desire to do better work than they are doing at present, and that a good course of study will have a great tendency toward that end.

Teachers will be stimulated to make better preparation, Superintendents will give more careful study to their department, and County Boards will arrange their examination of applicants upon a more scientific basis, which will tend to ascertain, more fully than is now done, the applicant's fitness to teach.

SECOND PAPER

A. B. Coffey

Among those who dug deep to find the golden bed-rock upon which to found the modern empire of the Argonauts were the ever-present sons of Missouri; and from the days of "forty-nine" to the days of ninety-four there has not been held within this commonwealth a political convention, a church conference or an educational association where the voice of the Missourian has not been heard.

This unwritten law of custom must, in a measure, account for my place upon the programme. And yet I don't know just why the Superintendents of this State asked me to speak upon this theme unless they want some plain talking, unless they wish the subject handled without gloves, unless they would have a man, even though a feather-weight, who will strike right out from the shoulder. Believing that such is your wish and my duty, I will talk to you just as I think; and if I step on some corns it will be because you haven't worn the right kind of shoes; and if I level down some mounds, it will be because you are encamped too close to the burial ground of the fathers. However, let me say right here that you have given me the wrong side of the question. It is the first duty of a critic to find the merits rather than the demerits, the advantages rather than the disadvantages. And in that, I know that I would make a good critic; for I would much rather look upon that side of the picture athwart which the bright rays of the sun are ever shining; I would much rather find the beauty and music of the song than the discord. And I should much rather talk to you about the advantages of our excellent school system than of the difficulties in the way. I should much rather marshal the vanguard of education than serve as surgeon in the ambulance corps. But as you have assigned the task, I shall strive in the simple manner of a plain Missourian to tell you the unvarnished truth.

There is no "Ideal Curriculum" or there are too many. So long as our course of study is to be left where it is; so long as the various county, city and high school Boards throughout the State are expected to formulate their own courses of study, will there be a very great diversity of opinion as to what constitutes the "Ideal," or, rather, will there be as many ideals as there are aforesaid Boards. Consequently, "as too many cooks spoil the broth," too many Boards spoil the course of study. However, as I intend, under another head, discussing the appointment of Boards, I will simply say here that so long as precocious boys whose early pin-feathers betoken a rich plumage; so long as antebellum fossils, who are yet considered oracles of wisdom; so long as unthinking, unprogressive men whose allegiance to party is never questioned, are placed in position to dictate to our Trustees and teachers what shall be taught in our schools, must our curricula essay the task of meeting the varied wants of the antipodes. Just so long as five men in each of fifty-seven counties undertake to bend the course of study until the individuality of every man is enstamped thereon, may you expect to find widely diversified requirements in the counties of the State. You may, possibly, suggest to me that it is well it is so, as out of a multitude of counsellors comes wisdom. Agreed. But—

"Let us gather up the wheat and roses,
Casting out the thorns and chaff."

I do not ask you to harmonize all of these. As well might you attempt the task of harmonizing the everlasting jingle of a Chinese band with the soul-stirring symphonies of Rubenstein. Let us presume that in every county in the State, there is the best course of study that can be formulated by the Board of Education of that county. Now, let the State Board of Education take the several courses of study as sent out by the various Boards as suggestive; and let the State Board prepare a course of study to be used in the country schools of the State; and let them prepare another to be used in the city schools. I know that this will meet with your disapproval, as you insist that what is good for the city boy is good for the country boy. Theoretically, yes. But, practically, what do we find to be the fact? It is an utter impossibility for the same course of study to be used in both schools, for the reason that there is in the city one teacher for each grade or fractional grade, besides a special teacher for certain given subjects, while in the country upon one individual often devolve the triple duties of principal, assistant teacher and janitor. It is also a fact that, in our vain effort to keep pace with city style, we of the country have fallen into a slip-shod manner of teaching certain subjects which is actually vicious in its tendency, as it detracts from our self-respect, impedes our progress along other lines, and, worse than all, by its leavening influence, leads our scholars to be satisfied with very imperfect and partial work. By all means let us have two courses of study, prepared in the manner suggested, either by the State Board or by a committee appointed by the State Board. Then let these two courses of study have the force of law throughout the cities and counties of the State. And when the "Committee of Ten" can find no fault with your curriculum, send it upon its mission. Then will you come face to face with an obstacle for the disposal of which your patience, your tact, your diplomacy, must all be brought into requisition. If you think that your coast is clear, be at once undeceived. You have reckoned without your host. Right across your pathway will you find an almost invincible host of trustees and patrons who have come up through great tribulation from the old school, and who insist that there is but "one road to Rome," and that the abcdarian trail up which they climbed in single file. These "newfangled notions of number lessons, of language lessons, of word methods and one hundred and one other fiddle-sticks are but a lot of whimsical balderdash," for which they have no use whatever. More than one of you have found patrons who, without any personal knowledge of grammar, have made such fortunes as would cause the eyes of 100 per cent. of our teachers to turn green with envy. And the education with which they figured their way to success they believe an all-sufficient criterion by which their offspring shall be equipped. You know business men who would have their boys crammed full of bookkeeping and percentage to the exclusion of everything else; mothers who would have their daughters taught music and drawing at the expense of physiology and composition. There isn't one of you who hasn't at least one patron who arbitrarily selects some line along which he would have you teach his child to do rather than think. Of course I am talking now of exceptions. They are exceptions. But they exist. Some of you may flatter yourselves that you have escaped them; but let me assure you that some time in the very midst of your exultation they will come to sit, like Banquo's ghost, where you believe yourselves supreme. And these objectors will not down voluntarily. They have a right to their opinions. You must convert them by missionary work. They must be convinced that while traits and tendencies are hereditary, environments and requirements are not. You must convince them that you are not educating their children for the past generation; but for the present and the future.

You have now to find teachers who will stand by the course of study. Do you believe that there are teachers in the State of California who, boasting of their knowledge as superior to that of any Board of Education, declare that they will follow the *ipse dixit* of no man nor set of men? Do you know that there are others who tacitly accept and as wantonly violate the course prescribed for them to follow? There are just such teachers. Do you know that there are Principals of Grammar Schools who have not the time in their work for composition, although they have ample time for Geography and Arithmetic? There are just such teachers. Such teachers often sit in astute judgment upon the County Board of Education before they ever come to work under the guidance of that Board. Such teachers sometimes stand in the very presence of their classes and advertise the short-comings and narrowness of the Board; and then, as a fitting climax, sometimes seek membership thereon. Happy the Board of Education, happy the teachers of the county, happy the scholars of the county if such ambition is foiled. You will find such teachers in every county in the State; and, naturally enough, you will find them among the itinerant class, side by side with their superiors —superiors, who, because of their industry, their efficiency, their honest love for their work, deserve the support and retention of a school-loving community. The school and the course of study are problems for the solution and mastery of which the teacher must remain at his post longer than the probationary six months.

Three things work the itinerancy of teachers. The shortness of terms; the disposition of Trustees to change teachers for the merest pretext; and the disposition of teachers to travel. While teachers are employed for six or eight months, and often for a shorter period of time than that; while teachers are wont to live a sort of nomadic life, more variable than the birds of passage, must we still wait for those results for which we have so long hoped in vain. I tell you that the man who taught last year in Del Norte, the year before in San Diego, and the year before, possibly, in Missouri, should be an unwelcome guest in Santa Cruz this year. It is about time that popular opinion should compel these pedagogical Gypsies to pitch their tents long enough, at least, to trade horses. It is about time that popular opinion should compel these migratory birds to roost long enough, at least, to moult. I know that "A sitting hen never gets fat." I also know that "A rolling stone gathers no moss," While teachers flit from county to county for the veriest whim, while Trustees fail or refuse to recall competent teachers, must we still cry "How long? Oh, How long?"

This brings us very naturally to The Difficulties in The Way of Employing Teachers. As a rule, our Trustees want competent teachers. Yea, the great majority do. But, there are exceptions among them; and, it is my duty to discuss the exceptions. Some men accept the office of Trustee as though they were being offered as ex-officio scape goats; and they perform every duty in that perfunct~~ion~~t~~a~~ry manner which fades away into a sigh of relief when it is done.

There are others who remind~~ed~~ me of an anecdote which I once heard. It is said that in the early days of railroading across the Great American Desert, some section hands one day saw an immense buffalo stand in the middle of the track as a train was approaching. Just as the locomotive was within a few feet of him, he lowered his head and with a mighty rush attempted to butt the train from the track. A few minutes later, when the section hands were standing around the dead buffalo, whose every bone was broken, the boss, taking his pipe from his mouth remarked, in sympathy, "Well, pard, I admire your pluck but condemn your judgment." And so when I see one man arbitrarily asserting himself in the very face of two other Trustees and, possibly in the face of an entire community, I say: "Well, pard, I admire your pluck, but condemn your judgment." In America, it is the custom for the majority to rule; or rather it is the custom for the will of the majority to be respected.

One man has no moral, no legal right to claim the privilege of employing the teacher. The teacher should be employed at a meeting of the Board of Trustees, each trustee being allowed an untrameled vote; and no trustee should be elected to office for the purpose of calling an uncle or a cousin or an aunt to the position of teacher. Kinship is not one of the pre-requisites of either teacher or trustee. If there is one quagmire out of which we should strive with jealous care to keep the schools of our country, it is that "Slough of Despond" commonly known as "politics," But the odds are against us. Our County Superintendents are elected upon political tickets; and our Supervisors, elected in like manner, have political debts to pay. And, you know, that in politics the race is not always to the swift nor the battle to the strong. The result of an election is not always due to the survival of the fittest. Consequently, the appointment of Boards of Education often falls into the hands of men unacquainted with the needs of our schools and as unmindful, men whose conscientious scruples are in the same ratio to their prejudices as is a mole hill to a mountain. I feel like taking off my hat when in the presence of many of the men who are enrolled among the supervisors of California—men, who by inheritance and by affiliation, belong to God's Nobility. Men, who love their children more than they do themselves—men, who do not hold the welfare of their schools as secondary to that of their respective parties. But, I also know that there are beside them men whose public spirit and patriotism are infinitesimal in comparison with their armor-plated partisanship. And when these latter hold the appointing power, woe betide the luckless member of the Board of Education (let him be ever so worthy) who is not of the same political faith and practice; for his decapitation is but a question of time. While demagogues and ward politicians are elected as county fathers, may you expect positions upon boards of education to be distributed like trophies of war unto the faithful. And while henchmen do the bidding of the powers that be, may you expect an influence to work its baneful effects upon the examinations of teachers; for, as no stream can rise above its source, so the favorites of political bosses must stop very far short of perfection. Such men are often influential in securing certificates for others of marked inability, of marked inefficiency, and of marked immorality.

Upon the Boards of Education in the State of California, there are men and women upon whom the mantles of Arnold and Mann have fallen. Men and women who wish every teacher in their respective counties to be just a little better than every other teacher in the county. Men who "do themselves proud" when they marshal their own superiors into the field. However, even these are imposed upon; for in spite of every effort, the examination often merges into a kind of automatic faucet which turns semi-annually for the relief of certain cramming institutions, otherwise known as "training schools," whose business it is to regale our trustees and Boards of Education with well developed mushrooms at a three months' notice. While these things exist, while people prepare themselves for examination rather than for teaching, while people regard the Board of Education as a kind of Indian gauntlet beyond which lies liberty, must our examinations fall short of their purpose. It is a fact, everything which may be said to the contrary notwithstanding, that our examinations are often a test of the applicant's ability to answer a certain percentage of prescribed questions upon the text-books, the ability of the applicant to teach being left a matter of doubtful conjecture in the minds of the members of the Board. During my incumbency as Superintendent, it has been my good fortune to be associated upon the Board of Education with some of the best people in the public schools. People who love the schoolroom and who love the children whose destinies are being fixed therein. But I speak that I do know when I say that the certificate granted upon the county examination is often, too often, anything but an evidence of teaching ability. "With malice towards none and charity for all," I say, all hail the day when the history of the last county examination shall be written! All hail the day when our teachers shall be educated people who study the child more than they study arithmetic and algebra! May the time come, and come speedily, when those who wish to teach in the schools of this State and in the schools of all the States shall be required to pass the test of an honorable institution whose diplomas shall be recognized by the State Board of Education. You say that this will work a hardship upon the poor who are unable to take a course in such an institution. Then must it follow that rather than work a hardship upon the would-be teacher, you will work it upon the children of the community. Can you, in the light which we have to-day, afford to do so? And then, too, the individual who would make a teacher of himself can and must take a course of pedagogical instruction if he would not be left behind in the race for supremacy. You who read between the lines have unmistakable evidence of the fact that the teacher who would succeed must keep up with the times. You may say again that for the few terms which some teachers intend to remain in the schoolroom, they cannot afford to spend the time necessary to take such a course. Then if they do not intend to follow the profession, let them at once seek other employment; for we don't want prospective deserters.

We are now brought face to face with a state of affairs which we can but deplore. A state of affairs which is as patent to-day as it was in the days of Horace Mann. A state of affairs which is peculiarly marked because without a parallel in custom. I refer to the time-honored but unprofessional practice of some who degrade the teacher's desk into the position of a stepping-stone from which they intend (if the gods permit) climbing into other and more exalted avocations. I challenge any man to have and show a greater admiration and regard for honest and laudable ambition and aspiration than have I; but I do say that the schoolrooms of our country should not be occupied by those who are there for the sole purpose of securing funds with which to purchase a wedding trousseau, a law library or a doctor's pill box. I would do anything within my power to encourage aspiring disciples of Blackstone and Æsculapius, but I am unwilling that the one should whet his scalpel upon "Little Brown Hands" and that the other shall study the Lex Scripta and the Lex Non Scripta at the lifetime expense of future citizens. I would do anything within my power to encourage the Board of Trade in fostering the matrimonial market, even if I had to do so at a self-sacrifice, but I am unwilling to have the bridal veil cast one shadow over the minds of coming authors and statesmen. Why does not the minister use the sacred desk as a springboard from which he would leap into some higher calling? Why does not the surgeon use his operating table as one rung in the ladder upon which he will climb to something better? Who ever heard of a lawyer seeking other fields of employment unless it be amidst the dust and smoke of the political arena? And why do not these knock for admission at the portals of other professions? Obviously for the reason that public opinion has raised the standard of excellence in each of the "learned" professions so high as to inspire a most exalted and most commendable ambition among the members thereof. The man who, with ulterior motive, would foist himself upon one of these professions for the purpose of gaining a leverage with which to enter another would remain unknown. If he attempt to issue prescriptions, he will find himself without patients; if he be admitted to the bar, he will wait in vain for clients; or, if he occupy the sacred desk, he will read the ritual to empty pews. Let us this day clasp hands in sacred pledge that we will fellowship with no man whose sordid propensities furnish no higher motive for his entrance into the schoolroom than his greed for gold. And let the teachers of the State and Nation so acquit themselves that their's may become the profession to which all others shall be subservient. To that end, let us stop short of no effort for self-culture, self-improvement, self-exaltation.

There was a time when the highest authority upon the ills to which flesh is heir was none other than the village barber. There was a time when the country squire who could, in pompous phrase, expound the Common Law was considered fit incumbent for the jurist's gown. There was a time when the man who stood at the sacred desk to break the Bread of Life needed only to be called and sent. There was a time when the aspiring school-master found his model in an Ichabod Crane. But, "Times change and we change with them." The Tonsorial Artist with his cup and lance now has his place only in traditional history; while, in his stead, through years of arduous study in the lecture room, over the dissecting table, and through clinics, come the learned doctor and surgeon. While "His Honor" of Flat Creek Township still sends his fledgling forth to "practice at the bar," the pettifogger is, ere long, forced into his proper sphere by the young man whose course has been long and systematic or by the overpowering and overshadowing influence of the great schools of law from which there go out annually scores and hundreds of men, well read and well qualified to administer justice or decide the destiny of a human life. Once in a while, there may yet be found one of the "elect" upon some lonely hill-top idly waiting for a pentecostal shower of cloven tongues or for the mantle of Elisha to fall upon him with power from on high; but his sonorous voice in psalm singing rings out upon many a vacant pew while the intelligent masses listen with delight to the profound and scholarly student of theology and religion. While these things, as though blazoned upon the very sky, mark our ever ascending progress; they are no more forcibly patent to the thinking man than is the fact that the hero of Sleepy Hollow with his "Three R's" and his social tactics, riding farther and farther into the honored past, has given way to the influence of an educated profession whose greatest problem is the child-mind—a profession, the greater part of whose numbers are broad minded, well equipped men and women who have come up through normal schools, ranking for the most part with the best law, medical and theological schools of the country. Far be it from me to undervalue the work done by our educational pioneers. All honor to those who have blazed out the path through obstacles and discouragements, that we, starting from their vantage ground, might reach the altitude upon which we now stand. But do you think that they would have us keep ward and watch beside their bones? Peace to their ashes, they already sleep in the "Promised Land;" and if we would strew garlands upon their hallowed mounds, let us seek new flowers in the "Garden of Hesperides." He is a poor sort of soldier who can only boast the scars and battlefields of his grand-sire; if we have the blood of heroes in our veins, let the soreness of our feet attest the broken clods upon which we bruised them. I believe that if there is a place outside the church of God, where men should be inspired, that place is the village school. In commerce, in mechanics, in science, with unceasing toil and unfaltering zeal, men burn the midnight lamp. It was only after months and years of thought and effort that Franklin

"Bade the Heavens their blasts expire,
Curbed the fierce storm and held the imprisoned fire."

And had Morse been satisfied with the lightning rod, he would never have been inspired by that grand and glorious thought which

"Snatched the blazing autograph of the Almighty from the murky sky and bound it to a bit of wire." Unsatisfied still, as did the ambitious youth who scaled the rugged cliff to write his name above that of Washington, our own Edison climbs high and writes his name above them all.

Oh, teachers of California, let these things be thought and food for you. With souls on fire and hearts aglow, return to your duty once again; and there in the presence of your schools, raise your eyes to Him who has ordained you to your work, and record the solemn vow that, so long as you tread the narrow span which skirts the mystic Future and the shadow land Yesterday, you will so blend achievement and possibility as to make every school in the Golden State an ideal exemplification of an "Ideal Curriculum."

Upon the conclusion of these papers State Superintendent-elect, Samuel T. Black, was introduced and delivered the following address:

ADDRESS OF MR. BLACK.

The perpetuation of free institutions depends upon the intelligence and patriotism of the people. Hence it is that a free State owes it to itself to see that every child within its borders shall receive the best and broadest culture that is within its power to bestow. The State, therefore, has a right to demand, and does demand of its educational department an opportunity for every child to receive this culture. This demand is not met by training the intellect alone. The emotional side of child nature and physical conditions must receive their due proportion of attention. Add to these the pressing demand of the decade, that the eye and hand of the child shall be trained, and the result will aim, at least, at that full and properly-balanced education so essential to a well-ordered State and prosperous and happy people.

To devise ways and means whereby this end may be reached has brought us together here to-day.

It is for this purpose that educational associations are being formed all over the civilized world, and perhaps nowhere so rapidly so as in our own country.

There are, at this moment, thirty other State Associations in session, all working along lines similar to those so ably laid down by the Executive Committee of this Association.

Allow me to ask in passing what other profession or calling can show the same unselfish spirit? Here you are gathered from every quarter of a large State at your own expense—many of you foregoing the pleasures of the annual Christmas gathering of those near and dear to you—to the end that you may be the better prepared to take up the duties, burdens, and responsibilities of the most self-denying of callings.

I take it to be the especial province of Superintendents, City, County and State, to present to these conventions the practical or working side of the educational question; and right here I desire to compliment the Committee on Programme for the very skillful manner in which they have distributed the work of this meeting of the Association. Every possible phase of educational work has received its due proportion of attention.

In view of the relations that in all probability will soon be established between myself and the schools of the State, it may not be out of place to call your attention to some questions of practical importance that present themselves to my mind, and ask at your hands their careful consideration.

It would be unprofitable, at this time, to attempt to take up all of the many suggestions that, at different times, have occurred to you and me in the course of our experience, whereby some improvement—some reform—might be brought about, nor shall I attempt much, if any, argument, as I pass from point to point in what I have to offer.

First—The local governmental control of our schools should be free from partisan politics. The doctrine that "to the victors belong the spoils," whatever may be said of it in State and National affairs, is most pernicious in school matters.

The spoils system, in our rural districts and smaller towns, cuts so small a figure that I pass it by. Here the governing board is selected at large and the law provides for a continuance of the majority in office, and it can be truthfully said that the schools are fairly well governed.

In most, if not all of the counties, the intelligent influence of the County Superintendent of Schools is felt in every school district, and his wise counsels sought by the great majority of School Boards. It is not so in our cities, and yet over 40 per cent. of the children of California live in cities of 10,000 and upwards. While school affairs are fairly well managed in some of our larger municipalities, if we are to believe what we read and hear, it is high time something were attempted. Superintendent-elect Moulder of San Francisco, I see, has taken a position in favor of a smaller and an appointed Board. Mr. Moulder is a man of large school experience in the State, as well as in San Francisco.

Similar views, I know, are held by Mr. John Swett, the retiring City Superintendent of San Francisco, and formerly State Superintendent of Public Instruction. I have talked with many City Superintendents, and they all agree that a change is necessary. My own observation convinces me that some legislation is needed to avert the danger threatened by the present methods of securing City Boards of Education. Ward representation should be abolished as well as the plan of electing an entirely new Board every two years. I care not how wise nor how bold a City Superintendent may be, nor how good a Board he may have, he hesitates about adopting any policy of reform, because he has no assurance of support from the incoming officials. Knowing, as he does, that no matter how honest these officials may be of themselves, some of them are the selections of partisan political conventions, and that there is grave danger of an effort, more or less successful, to control them for purposes other than the well-being of the schools they are called upon to manage and supervise.

Now, if a city is simply a school district, as indicated by the Supreme Court in the San Diego case, where does it get its authority for a Board of Education? Why does it not elect its school board on the first Friday in June as other districts do? If the San Diego decision is far-reaching enough to place the city, in all respects so far as school matters go, on exactly the same footing as a country district, the solution of the difficulty seems to be very simple. In talking with Mr. McClymonds of Oakland, not long ago on this point, he suggested the division of school districts into classes. The suggestion is eminently practicable and commends itself to every practical school man. A division of the districts into three, or, at the most, into four classes, is all that would be needed. Then let the Boards vary in point of numbers from three to seven or nine, and if Mr. Moulder's plan of appointing instead of electing can be carried out in those districts whose boundaries correspond with those of the corporation, so much the better, but in all cases, provision ought to be made to secure continuity of policy by retaining in power a majority of the Board.

Such a plan would, in my judgment, insure the selection of intelligent men and women heartily in sympathy with our public schools, and who would deem it as high an honor to serve on the School Board as it is now considered to be appointed a Regent of the University.

Second—The amendment of Section 1817 by the Legislature of 1893, whereby the minimum amount of county school tax was raised from four to six dollars per census child, has not brought about the good result it might have done. It ought to have been the means of lengthening the school term, but a careful perusal of Superintendent Anderson's Biennial Report for 1893-4 shows that, while there has been a prolongation of the term in some of the counties, in others there has been a slight shortening, so that in the aggregate the average for the entire State for the year ending June 30, 1894, is about the same as the preceding year; in fact, it is a trifle less, having decreased from 8.01 to 7.95.

The schools ought to be kept open at least thirty-six weeks every year.

Watchfulness on the part of County Superintendents and care on the part of teachers, under the present law, will do much towards bringing about the much desired end. Section 1621, which provides for an eight months' school, might, in my judgment, be now amended with safety so as to secure the full thirty-six weeks.

There is hardly a district in the State where climatic conditions are such as to render a nine months' school impracticable. But if there be such districts, the provision concerning fire, flood, epidemic, etc., would save them from the penalty attached.

Third—When we consider the advantages offered by the State for obtaining a professional education, we may confidently look forward to the time, now not far in the future, when the system of granting certificates by examination will be abolished. The two great Universities, the three State Normals and the San Francisco City Normal ought to be able very soon to supply a sufficient number of trained teachers to meet the wants of our schools. I do not care how near your curriculum approaches the ideal nor how well your schools are supplied with laboratories and apparatus, if the classes are put into the hands of novices, more or less bungling work will be the result. The finer and keener the implement, and these are but implements, the greater the need of skill to handle it.

While on the subject of examination, let me call your attention to the pernicious custom of printing the examination questions for distribution, which is done by so many of the County Boards. These questions are eagerly sought after by the cramming schools of the State which prepare "persons to pass the county examinations." A skillful coacher, armed with the questions from thirty or forty counties, may safely promise a bright young lady or gentleman a certificate after a course of three to five months. The temptation to take this short cut in place of the four years' Normal work will be very great so long as mere ability to come up to the required percentage in examination gives the individual the same legal standing in the schoolroom as does the Normal diploma. If we must have examinations, the interests of our schools would not suffer if they were held annually instead of semi-annually, and I favor an amendment of the school law to that end.

Fourth—The question of free text-books is one that has given rise to a good deal of thought and intelligent discussion. It is not many years ago that I was of the opinion that sound economy demanded that the people furnish their own books, believing that the books, having no money value to the pupils, would lead to wasteful extravagance. But when I see supplementary books used daily by large classes for upwards of five years, and apparently, so far as wear and tear are concerned, good for a like period, I get around on the other side of the question as quickly as possible. Experience has shown that in the interests of economy—economy of time as well as money, to say nothing of the saving to the pride of the widow struggling in her poverty to give her offspring that to which they are entitled as a birthright—the books should be free. Our schools are not free, nor will they be free until the child of the poorest in the land stands on an equal footing with the child of the millionaire, so far as public school advantages are concerned.

Fifth—The legislature of 1891 is entitled to the gratitude of all friends of secondary education. By providing for District, Union, and County High Schools, it bridged the chasm that had so long existed between the Common Schools and the University. The law of that year was somewhat crude, but it set the machinery of the High School at work. Some of its crudities were removed in 1893, but more legislation is needed, and I understand a committee has had the matter in charge, and will probably present the result of its deliberations in the form of a bill to the incoming legislature. One thing more is needed, the Constitution ought to be amended so as to allow some State aid to this necessary department of popular education. It is not in conformity with the spirit of our institutions that the expense should fall entirely on the neighborhood where the High School is located. Nor does it appear reasonable that the State should provide for the support of the elementary schools and the University, and neglect a necessary adjunct to the one and feeder of the other. While it is true that the students derive the most direct benefit, it is also true that the State is the gainer by the additional culture thus brought to its citizenship.

Sixth—My sixth and last point has reference to the excess of girls not only in the high schools, but in the upper grammar grades. Does any one knowthe true reason for this undesirable condition? I confess that I have no satisfactory theory, and yet I have given the subject a good deal of thought. The present century has opened the doors of the colleges and universities to ladies, and in not a few instances, I am happy to say, the sweet-girl graduate has walked off with the honors. I believe each year sees an increased percentage of girls in our universities. It is, therefore, not unreasonable to suppose that, possibly, the near future will see similar conditions even in our higher institutions of learning. The deplorable feature of the whole business is, not that the girls as a class are being better educated, but that the boys are neglecting the generous opportunities provided by the State. A systematic crusade ought to set in all along the line, beginning with the boys in the fifth or sixth year of school life, attempting to create in the mind of the boy a healthy desire for more advanced school work. For one, I would like to see the experiment of having more men teaching in the higher grammar grades tried in some of our schools. Of course I do not mean simply men, but the right kind of men.

These are the matters that strike me as being of more pressing importance than others that I have in mind. You have all thought over them many times no doubt. The time has come to change thought to act. If we cannot reach the Legislature in 1895 in all the matters referred to, we can do what we can, and in the meantime prepare for that of '97, looking ever, hoping always, and working incessantly for that intelligent progress that knows no retrograde movement, each day building higher and building better, always reaching upward to the ideal as God gives us to see the ideal.

In closing, I want to ask you, each and all, for your generous support, wise counsel and legitimate criticism, in the discharge of the duties of the high office to which I have been called. I believe I fully appreciate the grave responsibilities that I am about to assume, and I face them with a determination to do my full duty, looking to the Great Dispenser of all wisdom to direct my every act.

I propose to take up the work where my friend, Superintendent Anderson, shall lay it down, and should I succeed in bringing the same energy and wisdom that have characterized his administration, to mine, I shall feel at its close that I am entitled, as he is now entitled, to the cheering words, "Well done, thou good and faithful servant."

At the close of Superintendent Black's address the Resolution offered upon a previous day, to Amend the Constitution was taken up and adopted.

The following Report of Committee on Resolutions was received and adopted:

WHEREAS, The city officials and citizens of Santa Cruz and the teachers of Santa Cruz County have welcomed us so cordially, and entertained us so generously during this session of the Association; therefore,

Resolved, That we express our keen appreciation of the entertainment so hospitably extended; of the continuous and successful efforts of the County superintendent and his assistants, and all members of the local committees who provided so well for our pleasure.

Resolved, That the thanks of the Association are due, and hereby tendered to the officers of this Session for the faithful and efficient discharge of their respective duties.

Resolved, That the California Teachers' Association does not favor the pensioning of teachers.

Resolved, That a committee of three on school legislation be appointed by the Chair.

Resolved, That a committee of three on school hygiene be appointed by the Chair.

Resolved, That it is the sense of this Association that a law be passed permitting the introduction of manual training into the schools of California.

Resolved, That the California Teachers' Association does not favor the pensioning of teachers.

Signed:—R. S. HOLWAY,
FERNANDO SANFORD,
MARY E. FOY,
A. B. COFFEY,
CLARA A. MARCH,
LELIA E. ALDRICH,
SARAH M. WILSON,
M. W. HASKELL,
RUTH MERRILL,
Committee.

W. H. V. Raymond offered the following resolution, which was adopted:

Resolved, That a committe of three, together with the Secretary, be appointed to provide for publishing the Proceedings of this Association, said committee to make such terms and so edit the Proceedings as to leave $100 in the treasury after the expenses are paid.

In accordance with these resolutions the Chair appointed the following committees:

ON LEGISLATION—Prof. C. W. Childs, Prof. P. M. Fisher, Prof. J. W. Linscott.

ON SCHOOL HYGIENE—Prof. Wood, of Stanford University; Prof. J. W. McClymonds, Oakland; Miss Lucy Washburne, San Jose Normal School.

ON PUBLICATION OF PROCEEDINGS—W. H. V. Raymond, Prof. Irving Stringham, University of California, and Mrs. Maggie Hood, Pacific Grove.

On motion of Mr. Holway, the Council of Education was requested to enter into correspondence with School Superintendents and County Boards of Education with a view to discussing curriculum, and to present a report based on this correspondence at the next meeting of the Association; and the Executive Committee was authorized to meet the expense of such correspondence so far as the funds of the Association would justify.

Friday Evening.

The Association being called to order, President Kleeberger, in some graceful remarks, introduced President-elect Barnes, who, in a brief speech, assuming the duties of his office, thus referred to the outgoing President:

In the first State Association which I attended in California I had the good fortune to sit beside an old-time educator who knew every one in the State, and who struck off the various prominent characters as they entered the hall with a few characteristic phrases. I remember well that, as one tall man entered the room, my instructor remarked: "Notice that man. He is one of our prominent teachers and one of the best Normal School men in the country. He is a college-bred man, thoroughly well trained and thoroughly conversant with the educational problem of the State. He has a good mind, a heart that is always true to his friends, a good physique and an excellent digestion." The man whom I met under these happy auspices was the gentleman who has so ably presided over the deliberations of this Association during the past days. An intimate acquaintance with him during the past three years has convinced me that the school man at my side was right in all of his particulars.

Continuing, Mr. Barnes said:

As marking educational progress a sense of brotherhood may be noticed in county and State meetings—an atmosphere that is healthful. To-day it is bringing out fruit in secondary schools and child-study and text-books, and in a thousand other directions, all full of promise. Our Superintendent coming with a policy new and bold, we can depend on real educational life and feeling in the State. We must have your aid. Help us. For three years I have had pleasure in working with you. The highest honor that could come to me is to be elected by this body as its President, and I hope that next year we may have a vigorous and powerful meeting at Oakland.

The evening had been set apart for an address by Prof. Joseph Le Conte, of the University of California, and President of California Science Association.

THE PSYCHICAL RELATION OF MAN TO ANIMALS.*

PROF. LE CONTE.

There was a time when science was content to confine herself to inorganic nature. Life was a mysterious principle unrelated to the forces of nature and therefore a field for philosophic speculation, but not for exact knowledge. But this region has already been subdued by science. Already life is correlated with other forces of nature, and biology has fairly entered the ranks of progressive sciences. And now at last the border which seemed so long to separate impassibly biology from psychology has also been crossed by science in her daring march. Here at last we touch the highest phenomena, and science seems identified with philosophy, in subject matter if not in method.

My object now is to touch some points in this borderland, but only briefly and lightly in the way of suggestion. What I now say may be regarded as a continuation of the lines of thought suggested in my previous writings on the relation of man to nature and especially to the animal kingdom. In these previous writings I try to show that, without violating the analogies of nature we may conceive the spirit or mind of man as having arisen by progressive individuation from the forces of nature. That it existed first in inorganic nature as a potentiality, in plants as a germ, in animals as an embryo, which finally came to birth in man. In this paper I wish to fix attention on this last change and show in what it consists. I wish to show what is the essential difference between the spirit of man and the anima or soul or intelligent principle of animals.

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* An address as President of the California Science Association, printed also in the Monist, January number, 1896

This question lies at the very basis of philosophy. It is the question most fundamental of Locke, Hume and Kant, viz: the origin of knowledge from sense impression. It is more: it is a question which touches the origin of all that is characteristic of man, art, language, society, morals, religion, science, and is thus closely bound up with all our dearest hopes and noblest aspirations. But under the new light now shed on every department of thought by the theory of evolution, it must be approached in a new way and investigated in a new spirit. For if this subject lies at the basis of philosophy, it is now shown also to form the very summit and crown of all science. If ever we are to have a comprehensive and rational philosophy of nature and man, science must solve this question.

In the past man, body and spirit, has been studied too much apart from nature. Thus the anatomy, physiology and embryology of man were separate sciences. This is no longer possible. The comparative method is the great method of discovery in all the more complex departments of science. This method has been succesfully applied to all that concerns the human body. The time has come when it must also be applied to the human spirit. Anatomy did not and could not become scientific until it had become comparative anatomy; physiology and embryology until they became comparative physiology and embryology; so also psychology will never become truly scientific until it becomes comparative psychology—until the mind of man is studied in relation to those foreshadowings and beginnings of the mental phenomona, which we find in animals and in infants. This is just what psychology is waiting for to-day.

But there are two opposite dangers against which we must guard. The older thinkers saw an infinite gulf between man and animals and therefore thought lightly of the apparent likenesses. Modern science, on the contrary, recognizes and rightly insists on the resemblances, but seeks to minimize the differences. Now the only rational attitude is to admit with the evolutionists the close resemblance and even genetic connection, and with the older thinkers the enormous differences, and then try to reconcile these two very diverse facts.

Admitting, then, both the close resemblance and the immense difference, admitting also the genetic connection—the one having come out of the other by a process of evolution—I wish to show in a general way in what consists the essential difference—to put my finger as nearly as I can on the dividing line where humanity emerges out of animality.

This I know is a difficult problem. The acutest minds have striven in vain to solve it. I am not so vain as to imaginge that I can do so completely. It can only be done by a profound critique combined with far wider and more accurate knowledge than we yet have of the phsychical phenomena of animals and of infants. All I can hope is to contribute something, however small, toward its solution, by bringing forward an assemblage of differences, each one small at first, but a germ from which something distinctive of humanity seems to grow; each one, perhaps, unsatisfactory by itself, but each strengthening the others, and therefore all together convincing;

each in some sense similar to all the others and therefore strongly suggestive of common origin. Of these several differences we take up first those which seem simplest, in the hope that these will furnish a key which will help us to understand the others.

I. Language—Speech.

This has always and justly been regarded as one of the most important distinctive characteristics of man, and some make it the one essential distinction from which all others arise. But dogs may be taught to understand human speech and parrots may be taught even to speak intelligibly. Now, what is the difference between such parrot speech, or better, between human speech as understood by a dog and the true rational speech of man? Some will doubtless say that parrot speech is mere succession of imitated idle sounds signifying nothing, associated with no idea or object in the mind of the parrot. But I am sure those who have observed closely will agree with me in thinking that in them words and phrases are sometimes associated with objects and actions. When she says, "Polly wants a cracker," she means what she says. When she says, "Bring in breakfast," she expects food to be set on the table. Amid much idle repetition there is certainly often a dim association of word and thing. What, then, is the difference between this and human speech? I answer in brief: It is just the difference between sign-language and rational speech; meaning by sign-language all movements or sounds which by repeated collocation become associated with things or actions or emotions.

SIGN-LANGUAGE VS. RATIONAL SPEECH.

All the higher animals have their cries of fear, rage, and pain, or notes of pleasure, joy, and love. Social habits, in default of notes, necessitate other and more elaborate means of communication. Ants, for example, undoubtedly exchange information by touching antennæ. The sign-language of deaf mutes is mostly the same, although the rational human mind always puts something more into it. The alphabetical sign-language of mutes is, of course, of a higher order, and a strictly human sort.

Now, words as well as gestures may be only signs; and speech may be only word-sign-language. Words may be only the signs of things, so that by frequent collocation the word suggests the thing and the thing the word. This is the best that can be said of parrot speech or of the speech of man as understood by the dog. Such speech does not differ except in degree from the movements of an intelligent dog who wishes to make known his wants to his master, or the sign-language of an ant who tells his fellow of a fortunate find. In this sense all animals talk. It is true that in the case of the parrot the words and phrases have been learned; but by frequent collocation of words and things the two become associated in the mind so that words are no longer idle sounds.

But it will be asked, "Is it not the same with all language? Does not the child, too, merely learn the words, and, by practice to utter them? Does not the child, too, by frequent collocation of word and thing learn to associate them? Yes, true. All the speech of earliest childhood is nothing more than this word-sign-language—this imitative parrot speech. But true rational speech is different, and if we watch closely we can observe in the history of every child the one kind change into the other. The process is as follows:

The child, by frequent collocation, learns to associate certain words with certain things, and vice versa; then to use the words as signs of the things; then a phrase (to him only a long word) to indicate a certain action. This is all parrot speech, although far more perfect than that of any animal. But at a certain time, sooner or later, there comes something more, not only more perfect but different; not only a growth but a birth. At a certain time the child perceives the *power of words in relation to one another*. This is a perception *not of a thing but of a relation*. Or, if we call it a thing, not a material, sensuous thing, but an intellectual thing. He analyzes phrases which before were to him only long words and perceives the power of each part in relation to other parts. Immediately he is able thereby to make new, untaught combinations. He invents new phrases, creates original sentences. There is now for the first time a grammar in its language. There is no longer any limit now to new combinations. Some of these new combinations give rise to strange and even laughable phrases, which are repeated by the fond mother as the smart sayings of her darling.

Now just here true rational speech characteristic of man begins. All else follows as a necessary consequence. Words are combined into phrases, phrases into sentences, sentences into paragraphs and paragraphs into the most complex pieces of thought-work. But all before this is mere sign-language, not differing except in degree from that of animals. Many animals, especially the dog and the monkey, might be taught such language if their vocal and articulating organs were suitably formed; but the second stage no animal can attain, for want of the mental faculties necessary.

As word-sign-language, so gesture-sign-language may become rational by the presence of the necessary mental faculties. Thus, the sign language of deaf-mutes may be truly rational, being informed by the rational mind.

The difference here pointed out between word-sign-language and rational speech is similar to, and may be illustrated by, the difference between written and spoken language. As in rational speech the phrase-word is analyzed into its component words, and the separate powers of these components in their relation to one another is perceived, so in written language the analysis goes one step farther and each word is analyzed into its component sounds and the power of each sound in relation to the other component sounds is perceived. The first analysis is connected with the birth of human reason; the second with a higher stage of culture only.

I leave to others of greater acuteness to follow up the distinction here pointed out. My object now is to give a whole assemblage of similar distinctions, each one only in outline, trusting to their combined effect for the conviction I seek to produce. I wish to show that in all the faculties of the human mind, as compared with the corresponding one in animals, there is a distinction similar to that already pointed out.

II. Useful Art.

The gradation between the constructive art of animals and the lowest art of man is very complete. It is therefore more difficult to draw the line sharply here. Yet a little reflection will show where it must be drawn and that it is of the same kind as that already pointed out under the last head.

The constructive art of animals, as shown in the nest-building of birds, the dam-building of beavers, the complex galleries of ants and the hexagonal honey cells of bees, is apparently only the final result of a succession of blind divergent trials and survivals of the best methods, continued through successive generations and conserved in inherited brain structure, until a really marvelous excellence is sometimes attained. The successive improvements under such blind trials and survivals seem to be wholly unconscious and unintentional, and therefore exactly like the improvement of the organism itself under divergent variation, struggle for life and survival of the fittest. It is, in other words, unconscious evolution of constructive methods. This is what we call instinct, and it is in this way that the most wonderful instincts have been gradually formed. That we have rightly interpreted the significance of such art is shown by the fact that its excellence is in no wise proportioned to intelligence, but rather to the fixedness of habits and the narrowness of the line along which improvement has taken place.

But the constructive art of man, even the rudest, has always another, a reflective element. In man's work there is always a distinct conscious purpose or idea which he deliberately tries to attain. Furthermore, there is always in man a perception of law; unconscious, intuitive perception it may be — i. e., perception by methods which he does not stop to analyze and could not analyze if he would—but still a dim perception of the laws of nature underlying his work. In art, as in all else, man is always inventive—creative; and even the inventive genius of a Watts or an Edison is only a higher form of that which distinguishes man, even in the lowest stages, from animals.

But here again in art as in language we find on the human plane two grades, and the distinction between these two grades is perhaps more easy to draw than between the human and the animal. The two grades referred to are empiric art and scientific art. Empiric art is the result of dim, unconscious, intuitive perception of law; scientific art, the clear, conscious perception, the rational knowledge the laws of nature. Man originates and improves art by incessant trials, not, indeed, wholly blind, as in animals, but guided only by the dim light of intuitive reason. By this method alone, through successive generations and perhaps aided, as in the case of animals, by inherited capacity, a high degree of excellence may be attained. But sooner of later such art is arrested and either petrifies or decays. But if, under the stimulus of such art, science be once awakened, then the principles underlying the work are analyzed and understood and art becomes scientific, and thereby becomes endowed with a new and higher life, and thenceforward indefinitely progressive. Thus in this, as in all, there is for man a human life and a higher life. The one separates him from animals, the other separates him from his lower self.

III. Fine-Art Music.

I suppose most persons would say that it is in music—bird-song—that we find the nearest approach to man. Who has not been charmed by these songsters of nature? Who will deny that the pleasure we thus derive is really of a very high order? But the very fact that it is of a very high order ought to make us suspect that its source is all other than is usually supposed. There is, I am convinced, a profound difference between bird-song and human music and that the pleasure we derive in the two cases has an entirely different source. I would go farther and say that as the speech of parrots is no true rational speech, so the song of birds is no true music; it has no real æsthetic quality in it. Let me explain.

BEAUTY VS. SENSE-AGREEABLENESS.

Sugar affects our gustative nerves agreeably and quinine disagreeably. But no one would think to call-this pure sense-pleasure—beauty. So odors affect us with pleasure or pain, but no one would think of dignifying such pure sense-pleasure with the name of beauty, because these lower senses are not closely connected with the higher faculties of the mind. But in the higher senses, so close is the connection between sense-pleasure and the higher emotions, that the two become confused in the popular mind and therefore in popular language. Thus we often speak of a beautiful sound or of a beautiful color, whereas the proper word is sweet; for the pleasure derived from a pure sound or a pure color is on the same plane as that derived from sugar. It is pure sense-agreeableness and nothing more. But take *two* colors, place them side by side and compare them. Now something more and higher is at once preceived. Each color as before affects us agreeably (sense-pleasure), but in addition we perceive the relation between, whether of concord or discord. This is an intellectual perception, not a sense-perception. It is a perception of a relation, not of a thing. The effect is not on the plane of sense, but on the plane of mind. Here then is the simplest possible perception of beauty—beauty reduced to the simplest terms. The harmonious combination of color with color, of form with form, and these two again with one another, becoming more and more complex, and therefore higher and higher, constitute the whole art of painting.

So also is it with music, and the principle is best illustrated in this department. A simple sweet sound produces in us, not the feeling of beauty, but only a sense-pleasure. The æsthetic emotion, the so-called sense of beauty (see how hard it is to avoid the language of sense) is and must be at least one step removed from the plane of sense. But suppose we make *two* sounds either consecutively or together. Now we perceive as before each sound (sense-perception), but we perceive also something else which is not sense-perception. We perceive the relation between the two sounds, whether concordant or discordant. If concordant, we call it harmony, consecutive or chordal. This is beauty or æsthetic feeling reduced to its simplest terms—the simplest elements of music as distinguished from mere sense-pleasure. These simplest harmonies are then combined into musical phrases, phrases into strains, strains into songs and songs into the most complex choral or orchestral music. As the relation becomes more complex the result is removed more and more from the plane of sense; becomes more and more intellectual, but also more and more difficult to appreciate without long culture.

The outcome of the whole argument is this: The simplest element of beauty is still one step above the plane of mere sense. It is an intellectual perception, not a sense perception. It is a perception not of a thing, but of a relation, or, if we must call it a thing, then I would say that it is the perception of an intellectual thing, not of a material thing. As art becomes higher, the perceived relations become more complex and difficult to grasp, the intellectual thing becomes more and more removed from the plane of sense.

It is easy now to see why true art is confined to the two higher senses. It is because of the great variety of the sense impressions in these and therefore the complexity of the relations amongst these impressions. It is conceivable, however, that there may be a low kind of fine art connected with these lower senses of taste and smell. It is possible that by a skillful combination of tastes with tastes and smells with smells, and these two again with one another, the arts of cookery and perfumery may rise one step above the plane of sense. If so, we would not advise a special cultivation in the enjoyment of this art, because from the dominance of the sense-element there is danger that the intellect may be dragged down toward the plane of sense and thus debased. instead of the senses raised toward the plane of intellect and thus refined; which I need not say is the true end of art.

APPLICATION.

But to return and apply these principles. I do not believe that birds either make or appreciate music in the sense above defined. I am aware that many think differently. I know that some have even attempted to set bird-music to scale. But for myself, although I have a very keen appreciation of harmony—and perhaps for that very reason—I have never been able to assure myself of any true purposive harmonic relation among the consecutive notes of bird-song. Sometimes there seems to be, and sometimes not. When there is, it seems to be accidental and unintentional. The very best that we can accord to bird-music is what we have already accorded to the constructive art of animals. It is probable that by blind divergent trials and survivals of the sensuously best or most agreeable results, continued through successive generations, not only have the notes of birds become sweeter, but also, perhaps, some simple harmonic relations have been attained; not, however, because such harmonic relations were perceived and enjoyed as relations, but because there is probably also a sensuous element, a sweet nerve-thrill in harmonic vibrations. In any case, even those who think that they perceive real music in bird-song, must admit an enormous difference between it and human music. Sing it, play it on an instrument and see if we derive any pleasure at all from it. The difference is fundamental. Man creates combinations of sound purposely and indefinitely. He combines sounds into chords, chords into phrases, phrases into strains, strains into songs, and songs into choruses. Birds never reach beyond simplest phrases, and these not created, but learned and repeated or else inherited, and even so only sensuously, not æsthetically enjoyed.

I have often in early life and once again recently listened to what might be called choral music in birds. The red-winged blackbird and our western meadowlark often in great numbers sing together, filling the air with their "sweet jargoning." But although the effect was delicious, I could not detect any real concord. It was after all only sweet jargoning. The pleasure was evidently of an entirely different order from that derived from music, and similar to that derived from the sounds of nature, such as the rustling of leaves or the murmuring of streams.

But the question again returns, whence, then, the exquisite delight we derive from the song of birds? Why the ecstasy of the poets over the skylark and the nightingale? And why do we who are not poets, but love poetry, sympathize so deeply with the poets in this regard? I will try in homely fashion to explain the real source of this pleasure.

Suppose, then, all conditions favorable—bright spring morning, romantic spot, deep woods and murmuring stream. Suppose farther the ubiquitous small boy with glass-tube whistle and tumbler of water, hidden from view and trilling the joyous notes of the canary. It is easy to imagine our rapturous delight—a delight intense and pure just in proportion to the refinement of our nature—so long as we are deceived; but all pleasure immediately vanishes as soon as the imposture is detected. But why? If there be any real music in bird-song we ought equally to enjoy the whistle. But on the contrary all that is left is some sense-pleasure of sweet sounds and perhaps some intellectual pleasure from clever imitation, but of æsthetic pleasure there is not a trace.

What is the source, then, of the high delight in bird-song? Some sense-pleasure of sweet notes, doubtless, but what else is added elevating, refining, ennobling this sense-pleasure? I answer, not æsthetic pleasure of music, but sympathy with joy, with happiness, in the humblest of God's creatures. There is nothing nobler, higher, purer than this sympathy with nature in all its aspects and sounds, with murmuring streams, rustling leaves and singing birds. It is the sympathy of the spirit of man with the infinite spirit of nature, which is the spirit of God in nature. But its noblest form is sympathy with happiness in animals, for animal happiness is the harmonious activity of the whole being according to its nature, and is therefore the symbol of that higher spiritual happiness which is the holiness, the blessedness after which we all sigh. The pleasure above mere sense which we take in the songs of birds is of the same order as that we take in any exhibition of pure animal joy; in the gambols and skipping of lambs, the bounding of colts and the merry laughter of children. If we call it music, then it is the grand chorus of nature in which bird-song is but one single note.

But if there are those who would object to this view and would make bird-song a real music, thus lifting birds into the human plane in this regard, there are not wanting others who would accomplish the same result by dragging down human music—indeed everything human—to the plane of the animal. Many of the materialistic school of modern philosophy insist that all music is on the plane of sense—is naught else than successive pleasureable nerve thrills—and that harmony or what we call a perception of relations is but a unison of nerve-thrill with nerve-thrill to form a still more delicious compound thrill. The answer to this is plain. In consecutive harmony the combination occurs in memory only and therefore no compound nerve-thrill is possible. Again, what shall we say of the ecstacy of deaf Beethoven while composing his exquisite symphonies? Is this nerve-thrill? Thrilling of the auditory nerve in the deaf? Is it not rather soul-thrilling?

I need hardly say that the pleasure which some animals seem to take in human music, if they take any, is of a purely sensuous kind and not at all æsthetic. It is an enjoyment of sweet sounds, not of harmonic relations; it is delicious quivering of nerves, not a thrilling of soul.

What I have said of music applies, *a fortiori*, to all other forms of Fine Art. Music is the simplest and most fundamental of all arts, although for that very reason most highly developed. It is not pretended that other forms are found among animals, or possible for them.

IV.—Thought.

Thus far we have spoken of sensible results, of characteristic manifestations of human activity in language and in art, both useful and fine. We now come to speak of the power underlying and determining these characteristic results.

Perhaps in no department has there been so much discussion as to the relation of man to animals as in the department of thought. What is the relation of instinct and intelligence in animals to reason and thought in man? What is the origin of rational knowledge so characteristic of man? These are among the deepest questions of philosophy. I can, of course, touch them only in the lightest way, but as I touch them from the scientific side, I hope not without addition of some new light.

First of all, to make myself intelligible, it is necessary to distinguish between instinct and intelligence in animals. And then we shall be better prepared to distinguish between animal intelligence and human intelligence or reason. It is with this latter distinction that we are chiefly concerned.

INSTINCT VS. INTELLIGENCE.

It is common to imagine that instinct and intelligence are two corresponding but mutually excluding endowments, the one characteristic of animals, the other of man. But nothing is more certain than that both of these co-exist all along the line, from the lowest animals up to man, although in varying, almost inverse proportion. In man and animals alike there is a variable and invariable element in conduct or activity. The former belongs to intelligence, the latter to instinct. Under a previous head, in speaking of the constructive art of animals, I said that it is the result of blind divergent trials and survival of best methods, integrated by inheritance through successive generations, until the integrated sum may become large and the resulting art even more perfect than the lowest art of man. Now, the integrated sum is called instinct, while the individual additions must be credited to another and more voluntary faculty, which we call animal intelligence. All wise conduct or activity adapted to ends is the result of experience, but the experience is partly individual and partly ancestral or inherited. Of the whole experiential wealth, the inherited bank account belongs to instinct, the individual acquirement to intelligence. Now, it is easy to see that in proportion as the conditions of life are narrow and fixed and the habits of the animal limited to certain lines, in the same proportion will such activity become fixed in habits and such habits petrify in inherited brain structure as instinct. Thus it is that perfect instincts are incompatible with high degree of intelligence, and therefore that in animals instinct, in man intelligence greatly predominates. In animals the inherited bank account is large and the individual acquirement small; while in man, although the bank account is still large—much larger than usually supposed—yet the individual acquirement always predominates.

ANIMAL VS. HUMAN INTELLIGENCE.

But there is profound difference between animal intelligence and human intelligence or reason; a difference which is shown by the tendency of the former to integration and fixation as instinct. Intelligence, whether animal or human, works always by individual experience, but the individual experience is very different in the two cases. Experience, whether in man or animals, comes by trials; but the trials of animals are blind trials in all directions (divergent) and only by survival of the best methods is the end reached, while those of men are directed by thought to the desired end. Thus the individual acquirements of animals are the result of blind divergent variation of conduct and the survival of the best in useful habits, which habits are again finally embodied by inheritance in instincts; while the acquirements of man are the result of creative, purposeful thought. It may, indeed, be hard to draw sharply the line between the blindly experimenting intelligence of animals and the thoughtful intelligence of man, and all the more so because there is so much of the animal kind in man himself; but there is undoubtedly in man a wholly characteristic element, small it may be at first, but constituting a new departure with infinite consequences. We will attempt very briefly to indicate in what consists the essential nature of this new element.

Perhaps it may be put in a few words thus: Animals perceive objects or things only. Man perceives also the relations and properties of things abstracted from the things themselves, and thus forms conceptions or general ideas. Comparing with music: as there is a sense-pleasure (nerve-thrilling) and an intellect-pleasure (soul-thrilling) and all true music comes out of this latter; so there is a sense-perception and an intellect-perception (conception) and all rational knowledge is founded on this latter. Or, again, comparing with language: as all rational speech is founded on the perception of the power of words in relation to one another and therefore the meaning of words expressing such relations; so rational knowledge is based on the perception of relations and properties abstracted from things, and this perception, therefore, must precede rational speech. External, actual things are the objects of sense; properties and relations which are internal, ideal things, are the objects of thought. And this, be it observed, is only the lowest plane of thought; for the thoughts about these relations, and the relations among these thoughts, become in their turn the objects of thought.

In a word, animals perceive things only, or if in some sense relations also, only as embodied in, as belonging to, never as abstracted from things. Man perceives not only things, not only relations and properties embodied in things, but abstracts these from the things and considers them separately. Animals have given them percepts only; man, in addition, forms, creates, concepts also. And since such concepts are not given but created by him, there is no limit to their number and variety. They become more and more general, more and more complex, more and more abstract as we rise in the scale of reason. Now, since all knowledge is based on concepts or ideas only, it follows that what seems like knowledge in animals is instinct, and this in its turn but the inherited sum or the results of divergent, purposeless trials, and never the result of abstraction or general ideas applicable, as all general ideas are, beyond the limits of actual experience. In other words, in all true knowledge there are two elements, an external and an internal. Nature through sense furnishes the material; mind by thought shapes, lays and cements according to a plan or idea. Now, animals are slaves of sense; there is no creative work or mind. Of the elements of knowledge they have but the one. They have materials, but no builder, and therefore no edifice of knowledge; or if a seeming edifice, it grew—was not built.

But some will object that animals must perceive relations between themselves and external things, for how otherwise could they adapt themselves to external things? I answer: In animals there is indeed a kind of *practical awareness* of external relations, which guides their conduct more or less wisely. In man there is all this, but also something more, viz: a clear reflective cognition of relations as relations—of relations abstracted from things related—which relations thus become the object of thought and the basis of all knowledge. To illustrate take for example number: Animals distinguish one thing, two things, three things, etc., but have no idea of number abstracted from things. Now it is from this latter alone that come arithmetic and algebra, and indeed the whole science of number. Again, space: animals perceive space occupied by objects, but have no conception of space abstracted from its contents. But geometry, trigonometry, in fact the whole science of space comes from this latter. Again, time: animals cognize time in so far as it contains events, but not time as abstracted from contained events, yet the whole science of time or history, even history of our own lives, comes out of this latter.

V.—Imagination

I think, from the preceding, we may assert that animals only re-present in the mind as images what had already been presented to it in experience. In them there is therefore only reproduction of experiences. There cannot be in them therefore a real, i. e., creative imagination. It is true, man too is limited to experience for the materials out of which he makes pictures by the imagination, but only for the materials. These materials he combines in an infinite variety of ways and thus composes pictures which may never have existed in his own or any other experience. No such creation of pictures, by new and original combinations, it is believed, ever occurs in animals.

But it will be objected; do not animals, dogs, for example, dream, and are not dreams pure creations of the imagination? I answer, though we cannot enter into their consciousness, yet we may be sure that nothing appears in their dreams which has not already appeared in their experience. In their dreams they only go over again the exciting incidents of the chase previously enjoyed. The dreams of man, on the contrary, although they too are compounded out of materials furnished by experience, yet these materials are united in an infinite variety of ways so as to form new and often improbable combinations—are woven into strange and fantastic patterns. Human imagination is literally creative always. The power of making new combinations, of creating pictures, by the imagination, whether waking or sleeping, is essentially characteristic of man; the power of doing so with beautiful results is characteristic of genius. If the creative imagination, even in its lowest form, be characteristic of man, how much more must the higher form, and its beautiful result, fine art, be characteristic of him.

Reveries are but day dreams. In a waking state we also exercise the creative imagination in constructing fantastic, improbable pictures; only in this case we do not mistake them for objective realities as we do in dreams. We build castles in the air both waking and dreaming, but in the former case we recognize their unsubstantiality. Now if we are right in what precedes, then reveries also are characteristic of man. But if revery, then also hope; and if hope, then also memory is characteristic of man. Animals live only in the present, man also in the past and future. If it be objected that animals profit by experience and therefore must have memory; I answer, so do they provide for the future, and yet they obviously have no idea of the future. Provision for the future is in them only conduct without definite purpose continued from generation to generation, because the result is good and therefore in the struggle for life prevails over other conduct—a mere survival of the fittest conduct. Even so I believe memory in them is apparent, not real. They profit by experience; yet, I suppose such experience does not seem to them as localized in the past but as present, as in their dreams. The re-presentation of a past experience is to them like a present reality, only less vivid. As they have no idea of time as abstracted from events, they cannot have any idea of a history of self. But more of this under the next head.

VI.—Consciousness and Self-consciousness

External objects affect the sense organs. The impression is carried as a vibratory thrill or else as a propagated chemical change, along the sensory fibres to the nerve centre and determines there certain physical changes which in turn determine, how we know not, changes in consciousness, which we call sensations, perceptions, images, etc. Immediately there is set up a return series of changes, viz: Change in consciousness, which we call *will*, corresponding change in nerve centre, propagated change along the motor fibres, contraction of a muscle, movement of a limb and change in the external world. Thus through the nerve-system, with its receptive organs, the senses, and its executive organs, the muscles, is established action and reaction between an outer and an inner world. In animals this is absolutely all. But in man there is something more. The sensations, perceptions, images thus produced, become themselves the objects of perception and thought (reflection), and still more, the mysterious self in which these phenomena inhere becomes itself the object of consciousness and thought (self-consciousness). Thus there is a consciousness, the objects of which are the facts of the outer world, and there is an inner consciousness, the objects of which are the facts of consciousness. There is consciousness and a consciousness of consciousness, or consciousness in the second degree. There is a sanctuary and an inner sanctuary of consciousness. Now it is this higher, inner consciousness, this consciousness in the second degree, this consciousness of self, which is the characteristic of man. In the history of every child there is a time when self-consciousness emerges, or is born, out of the mere animal consciousness. At that moment it seems to me, the child rises out of the animal into the human plane.

I remember with great distinctness the time when consciousness of self first became clearly present to my mind, and the sense of mystery, the wonder, the awe it produced. I well remember the difficulty of imagining that others too felt, as I did, this infinite mystery of selfhood. With this undoubtedly comes the sense of personal identity and therefore of continuous personal history, and therefore also of true memory. Paradoxical as it may seem, I do not believe that animals have what we know as memory. Images of previous experiences are reproduced in their minds and determine appropriate actions, but the ideas of personal identity and therefore of these experiences as belonging to a self, existing at a previous time, I believe is not possible; and without a sense of continuous history there can be no true memory. The proof of this is, I think, to be found in observation of the phenomena of infants taken in connection with our own remembered history. There can be no doubt, as shown by Preyer, that a child one year old is already advanced far above the level of any animal. And yet such a child has, I think, no consciousness of self, no sense of a continuous history, no true memory of experiences as belonging to self, and therefore no future or past, no memory or hopes. All this, according to my own experience and observation, comes between two and three years of age, and therefore at a time when the child is already raised far above the level of any animal. If our view is correct this is the reason why our own remembered history extends back only to about this age. It extends only over the period of self-conscious, rational, personal existence.

If the childhood of the race be anything like that of the individual we can easily imagine the sense of wonder and mystery produced by the newly awakened recognition of selfhood. This accounts for the active, fantastic, but often beautiful play of the imagination amongst early peoples.

But it will be asked, "How do we know that animals have no consciousness of self?" I answer, because all that is distinctive of man comes out of this. We have already shown how all science, all rational knowledge grows out of the power of abstraction. Now the idea of self is an abstraction from the facts of consciousness. Moreover, it is the most fundamental of all abstractions, and that from which all other abstractions flow. It is therefore the underlying condition of science, philosophy, art, religion, rational organization of society; in a word, of indefinite progressiveness. Animals cannot have it or they too would have their science, philosophy, art, religion; they too would be indefinitely progressive, they too would be rational, morally responsible beings—in a word, they would in all essential respects be men.

One pregnant thought we throw out by the way and pass on. It is interesting to note here that man rises in the scale and approaches his ideal just in proportion as he departs from the characteristically animal. In animals the whole life and activity is concentrated in the *now*; man, on the contrary, by memory and imagination, lives also in the past and in the future. His life expands more and more backward and forward until in the ideal man he lives equally in all time, past, present and future. He weighs in equal balance all events without prejudice in favor of the now, and is thus, as it were, unconditioned by time. This is the ideal of wise or prudent conduct—the *intellectual ideal.* Again: in animals the whole life is concentrated on the *self*, although an unrecognized self. Man—and more and more in proportion as his distinctive human nature predominates—lives in and for other selves. His life expands and incorporates more and more the lives of others through sympathy and love. He reaches his ideal in this direction when his life spreads equally over all other lives in proportion to their real worth; when self-love no longer in the least disturbs the justness of judgment or unduly influences conduct; when self and other selves are weighed in the same just balance. In a word, when he is unconditioned by self. This is the ideal of right conduct, the *moral* ideal. The moral law of equal love to self and neighbor is now fulfilled. But observe: the necessary condition and beginning of this whole process of improvement is the recognition of selfhood. Man finds selfhood, only to lose it again in love.

VII.—Will and Freewill

The difference in this case is similar to the last, but it is even harder to draw the line of distinction sharply, because there are many degrees of freedom with almost insensible gradations between. There is, confessedly, no subject in philosophy more difficult than that of freedom of the will. I shall not attempt to define its exact nature. My attempt will be far less ambitious, but, as I believe, far more useful. I wish to show the various *degrees* of freedom in animal conduct, and that the most marked of these begins with man, and is, therefore, characteristic of him.

There are some, yea, many, in these latter days who cut the gordian knot of this difficulty by asserting that there is no such thing as free will, nor, indeed, will of any kind such as we imagine. They assert that the animal, yea, even the human body, with all its functions, physiological and psychological, is not else but pure mechanism; the whole phenomena of life is naught else than action and necessary reaction between the external world and the nerve centers. If the process is attended with consciousness, as it sometimes is, then we call the reaction will; but it is none the less necessary on that account. According to these philosophers an animal or even a man himself is a pure automaton; an automaton conscious of what is going on, but wholly unable to modify the automatic phenomena. Consciousness is present, true, but only as a passive, helpless observer. This view was presented in a masterly way by Professor Huxley in his memorable Belfast address in 1874. (Nat. 10. 3621874.)

To most persons (and I believe with reason) a sufficient answer to this is an appeal to consciousness itself; but the competency of the witness is disallowed by the other party. In default of this appeal I believe the best answer is found in the "*reductio ad absurdum.*" Let us try it.

If consciousness be not a factor in the result of the reaction of nerve-centers under the stimulus of sense-impression, then would this result, i. e. the conduct of animals be precisely the same, if there were no consciousness. This seems sufficiently incredible; but more remains. If consciousness and self-consciousness be not a factor in human conduct, then history or all the results of human activity, individual and social, would have been precisely the same as we now find them, even though there had never been any consciousness or self-consciousness at all. Society would have progressed, wars, revolutions and parliamentary debates would have occurred; telegraphs, telephones would have been invented; railways and cotton mills built; masterpieces of poetry, painting and music achieved; science, art, philosophy and religion would have arisen and blessed mankind; in fine, all details of work done and every word spoken or written would have been precisely the same even though man was wholly unconscious of what was going on. Man's body and man's mind, and human society, according to this view, may be compared to a complicated engine rushing along at a rapid rate without engineer except necessity or law or what not. Consciousness is on the engine, true, but only as passenger. Although understanding clearly and sympathizing deeply with every movement, though deeply affected with joy or grief, with hope or terror, wholly unable to modify the course of events. Everything happens by necessity and would happen just the same even though consciousness were not present at all!! It seems to me impossible that any sane mind, unsophisticated with metaphysical subtleties and fully realizing the logical consequences of this view, can for a moment maintain it.

And yet, and yet, most complicated and wonderful machinery in the animal and human body does work perfectly without consciousness. Complex, delicately adjusted, and appropriate purposive work does go on without conscious engineer. Here is the difficulty. How shall we explain it.

The animal body, as already said, is an instrument for action and reaction between the external and the internal world or nerve-centres. But there are many degrees in the freedom of the reaction. In the simplest and most automatic form, the steps of the process are briefly as follows—Action: (a) sense-impression, (b) inward transmission, (c) change in a nerve-centre. Reaction: (d) outward transmission, (e) muscular contraction, (f) change in external phenomena. In the simplest case this is all. Thus, if the spinal cord, or the medulla be the centre, action is followed by reaction with certainty and precision, and the most complex movements may be perfectly and yet unconsciously executed. The whole series is in the domain of physiology. But if the centre be the cerebrum, then at least two more links are added to the chain from the domain of psychology. The incoming current determines changes not only in the brain, but also in consciousness as sensations, perceptions, etc.; and the outgoing current is started, not by brain changes alone, but by will. Now, if the incoming current, started by sense-impression, is followed immediately, like the rebounding of a ball, by the outgoing current, determining movement without the intervention of consciousness and will, then we call the movement reflex. On the contrary, if changes in consciousness and will intervene and control the result, then we call the movement voluntary. The reflex system operates in all parts of the body and in all animals; the conscio-voluntary is superadded in some of the movements of the higher animals and then takes control. In these, therefore, the reflex underlies and conditions the conscio-voluntary while the latter stands above and dominates the former. If the conscio-voluntary be paralyzed or its activity suspended by sleep or coma, then the reflex is far more distinctly and universally operative.

Thus, then, there are two primary and strongly contrasted groups of animal movements, viz:—The reflex or automatic and the voluntary. But the great gap between these is almost wholly filled by gradations from each side approaching the other In the reflex group there are (a) the purely automatic movements, wholly withdrawn from consciousness as well as from will; such are the movements of the heart, stomach, intestines, etc.; (b) then come movements withdrawn from will but not from consciousness, such as swallowing, coughing, sneezing, etc.; (c) movements attended with consciousness and partly controlled by the will, such as breathing, etc. So also on the other hand are there voluntary movements in various degrees approaching the reflex. (1) Movements which are entirely voluntary —deliberate movements requiring the whole attention and, in some cases of complex movements, even painful attention. Such are nearly all movements made for the first time. (2) Habitual movements. These require only dim consciousness and a general superintendence of the will. They are withdrawn from the full undivided consciousness and are therefore semi-automatic. Ordinarily they go on without full consciousness or direct action of the will; but if anything goes wrong, consciousness and will quickly intervene to rectify and they again relapse into semi-automatism. Walking, flying, speaking, writing, playing on a musical instrument come under this head. They at first came under the 1st head, but were made easy and semi-automatic by frequent repetition. They are, therefore, acquired by *individual* experience. (3) Instinctive movements. These are still more automatic. They are the result, not of individual experience like the last, but of *ancestral* experience inherited through many generations. They are, therefore, withdrawn from individual experience, but not wholly from consciousness and will. (4) Reflex movements. These are finally withdrawn from consciousness and will but in various degrees as already shown.

Now, all these kinds of movements exist in animals as well as in man, although the first, i. e. the deliberately voluntary, only to a limited extent, and then only in the first formation of habits and instincts. Nearly all the so-called voluntary acts of animals are either habitual or instinctive and are determined by impulses and not by motives. But in man there is still a higher form of activity not yet mentioned, viz: that in which consequences, especially moral consequences, are presented to the mind and weighed; in which impulses, solicitations, motives are balanced one against another; in which all these are again made the objects of conscious thought, and we are distinctly conscious of the fact that we ourselves are umpire and responsible for the result. The determining factor in this case is will in a higher and freer sense than in any of the preceding. This is the free will characteristic of man. No such weighing of motives (if motives there be at all in them and not mere impulses), no such reflection on motives as objects of thought, ever occurs or can occur in animals. We call this free will, not because it is absolutely free and unconditioned, but because it is freer than any lower form. As already said, there are many degrees of freedom of activity. Instinctive acts are free in relation to reflex; habitual acts in relation to instinctive; and deliberative acts of animals in relation to habitual. So also self-determined moral acts are free in relation to all other lower forms. There is a gradually increasing freedom of activity as we go up the animal scale. The increase between animals and man is a great one, great not so much in amount as in the new possibilities introduced then and there. But absolute freedom belongs to God alone.

Finally, we have already shown in several departments a human plane and higher human plane; that there is a human life as distinguished from animal life, and a higher human life as distinguished from a lower. So it is here also. There is a free will distinguishing man from animals, and a freer will distinguishing a higher from a lower type of man. There is a free will which is free only in the sense of being self-determined and therefore morally responsible, but is nevertheless unwillingly restrained by, and chafes against, the bounds set about it by the all-embracing will of God, which is the law of perfect righteousness; and there is a freer will, freer because no longer restrained by external law, because the law of righteousness is freely the accepted as the law of its activity, because it moves freely in loving accord with the Absolute will.

Out of these two last, viz: self-consciousness and free will grow the moral and religious nature of man. These therefore must be characteristic of man. In fact they are the most obvious of all characteristics. We do not count them among the primary characteristics only because they so obviously flow from the simpler elements given above.

Now of the seven characteristics of man enumerated above which, if any, is most fundamental and essential; which, if any, underlies and determines all the others? Some have thought that speech is that essential characteristic from which all others flowed. But it is evident that ideas must precede at least rational speech, as defined in the early part of this paper. The perception of relations and properties abstracted from things must precede the words expressing these relations. On this account others with more show of reason regard thought, the power of abstraction, the power of forming general ideas abstracted from things as the most fundamental. This is indeed more fundamental than the other. But it seems to me there is another still more fundamental than this, viz: *self-consciousness*. This is the most comprehensive and fundamental of all abstractions.

The recognition of self as abstracted from psychical phenomena is the abstraction which includes and determines all other abstractions, and therefore the possibility of rational speech, rational thought, and all else characteristic of man.

Properties and relations have no real existence apart from things, and yet we must think of them as so existing, for they alone are the necessary materials of rational thought. Why is this? Why, but that one most fundamental abstraction in which all other abstractions inhère is indeed a reality. Why, but that the consciousness of Self is the cognition of the reality of which all other abstractions are but the signs and shadows, the cognition of the true reality of spirit which gives potency to all other abstractions and ideas. Have we not in this the foundation of a true realism, or rather a complete reconciliation of realism and nominalism?

Thus, then, self-consciousness is the underlying condition of all other characteristics of man. But those who are acquainted with my previous writings will remember that according to my view self-consciousness is itself but the necessary result and therefore the sure sign of completion of spirit-individuality, i. e. personality. In a word the view which I present in a paper on "The relation of man to nature," viz:—That spirit alone is essential energy, that which we call physical and chemical forces of nature are but different forms of divine energy immanent in nature, in a generalized or diffused condition, and that throughout the whole geological history of the earth there has been a progressive individuation of this energy; first, as the vital principle of plants, then as the anima or soul of animals, until at last completed in man. This view, I say, explains, as no other can, all the phenomena characteristic of man. According to this view the anima of animals is spirit in embryo fast asleep in the womb of nature, unconscious of self and incapable of life separate from matter. In man spirit came to birth as a distinct individuality capable of independent life-birth into a new world with the awakening of new and higher spiritual senses. This view, as I have more fully shown in the paper alluded to completely explains the resemblance in every faculty and yet the infinite difference between man and animals. It completely explains the significance of nature and of human life, and makes entirely reasonable our hope of immortality.

APPENDIX

EDUCATIONAL COUNCIL

At the meeting of the California Teachers' Association, held at Santa Cruz, December, 1894, the Executive Committee selected the following persons to take the places of those retiring from the Educational Council at that time: Mr. J. W. Linscott, Prof. Irving Stringham, Miss Lucy Washburn.

The names and terms of office of the members of the Council are as follows:

Ex-Officio.

Hon. Samuel T. Black, Sacramento.
State Superintendent of Public Instruction.

Appointed.

		Term Expires.
J. W. McClymonds,	Oakland, . . .	Dec., '95
Jas. A. Foshay,	Los Angeles, . .	Dec., '95
Edwin T. Pierce,	Los Angeles, . . .	Dec., '95
C. E. Hutton,	Los Angeles, . .	Dec., '96
C. H. Keyes,	Pasadena, . . .	Dec., '96
*Jas. G. Kennedy,	San Francisco, . .	Dec., '96
Prof. Elmer E. Brown,	Berkeley, . . .	Dec., '97
F. A. Molyneaux,	Pomona, . . .	Dec , '97
Frank Morton,	San Francisco, . .	Dec., '97
Prof. Geo. H. Howison,	Berkeley, . .	Dec., '98
Prof. Fernando Sanford,	Palo Alto, . . .	Dec., '98
P. M. Fisher,	Oakland, . . .	Dec., '98
J. W. Linscott,	Santa Cruz . . .	Dec., '99
Prof. Irving Stringham,	Berkeley, . . .	Dec , '99
Miss Lucy Washburn,	San Jose, . . .	Dec., '99

*Deceased.

In accordance with the request of the Association (page 90 of Proceedings) the following circular letter has been sent out by the Council of Education:—

To School Superintendents and County Boards of Education of the State of California:

The undersigned were appointed by the State Council of Education, at its meeting in Santa Cruz, December 28, 1894, as members of a committee to report on the question of the course of study for elementary schools.

Instead of preparing at once a complete curriculum for the elementary schools, this committee is desirous of proceeding as follows: First, to secure thoughtful and extended study of the question on the part of practical teachers in all the counties and cities of the State; Second, to secure the setting apart of at least one half-day of the next Institute in each of the counties and cities of the State for the discussion of this question; Third, to have papers prepared for presentation in these special sessions of the Institutes with reference to the course of study as a whole or some of its particular aspects, which papers shall be discussed by the teachers in attendance; and, finally, to have resolutions passed or the results of these discussions summed up in some other form of statements, which shall be transmitted to this committee. Such expression of the judgment of the teachers of the State, especially when that judgment is based upon a careful and impartial study of the question proposed, will be of great value to the committee in the preparation of its report.

May we invite your active co-operation in carrying out this plan in your respective counties and cities?

For the first series of special questions to be submitted for such study and discussion we would respectfully propose the following:—

1. Of the four great branches of study enumerated by the Committee of Ten, viz: Language (including, Reading, Writing, Language Lessons and Grammar), Mathematics (including Number Work, Arithmetic, etc.), History (including Literature and History proper) and Natural Science—should all be studied in each of the elementary grades?

2. If any are to be omitted in any of the grades, what, and in what grades?

3. If all should be pursued, what proportion of time should be given in each grade to each of the four branches?

4. Can any one study be designated in each of the grades which should be regarded as the chief study of that grade.

5. Should any one of the four great branches receive a notable increase of attention over that which it now receives in the practice of the schools?

6. How far and in what way should the natural tastes and aptitudes of the children be taken into account in determining the work of any given grade?

7. How far and in what way should the work be determined by the prospective life work of the children?

We desire to emphasize the importance of discussions based not merely upon preconceived opinions or results arrived at haphazard, but upon a painstaking study of the literature of the question and careful observation of the effect of studies upon the children in the schools. We would recommend especially that the two following works be read by all the teachers:—

The Report of the Committee of Ten (published by the American Book Co., Chicago).

The Report of the Committee of Fifteen (published by the Educational Review—Henry Holt & Co., New York).

In addition to these reports, the best available literature, bearing upon the subject, should be read as widely as possible.

The following may be mentioned as suggestive works:—

White: Elements of Pedagogy. (American Book Co., Chicago.)

McMurry: General Method; and Special Method for History and Literature, Reading and Geography. (Public School Publishing Co., Bloomington, Ill.)

Hill: The True Order of Studies. (G. P. Putman's Sons, New York.)

Parker: Talks on Pedagogics. (E. L. Kellogg & Co., Chicago.)

If the plan here proposed meets with your approval, may we ask you to present it to your teachers and enlist their hearty co-operation in carrying it out? Will you kindly send us, within one week of the close of your institute, a copy of any statement or resolutions bearing upon the subject which your teachers may have adopted? We should be particularly pleased to have added to such expression of the views of your teachers an expression of your own views upon the subject. It is our purpose to embody the results of our inquiry in a preliminary report, to be presented at the meeting of the Council of Education next December, and to be made the basis of discussion for the year following. In counties and cities where the Institute for the current year has already been held, we would suggest that the attention of the teachers be called to these questions, and preparation be made for their discussion in the next Institute; but that in the mean time the Superintendents and County Boards send us an expression of their own views in response to these inquiries, to be embodied in the December report.

The committee has not been authorized to incur so great an expense for printing and postage as would be involved in sending a copy of this circular to all the teachers of the State. We should esteem it a great favor if Superintendents would undertake to send out from their own offices a circular embodying either the whole or the chief part of the matter here presented.

Hoping for your active support in this important movement, we are,

Very respectfully, yours,

J. W. LINSCOTT,
ELMER E. BROWN,
LUCY M. WASHBURN,
JAS. A. FOSHAY,
P. M. FISHER,
Committee.

CONSTITUTION

OF THE

CALIFORNIA TEACHERS' ASSOCIATION

PREAMBLE

For the purpose of furthering the educational interests of the State, of giving efficiency to our school system, of furnishing a practicable basis for united action among those devoted to the cause in which we are now engaged, and of securing and maintaining for the office of teacher its true rank among the professions, we, the members of this Association, do hereby adopt the following

CONSTITUTION

SECTION I. NAME.—This organization shall be known as the California Teachers' Association.

SEC. II. MEMBERSHIP.—All persons who are now, or who may be hereafter officially connected with the public or private schools of this State, or interested in the cause of education, may become members of this Association by signing the Constitution and paying an annual fee of one dollar. The Secretary of the Association shall annually publish in the November number of the "Educational Journal" of this State, without expense to the Association, a list of the members, provided, however, that before dropping any member for non-payment of dues, such member shall, one month before that publication, be notified that dues for the current year are now payable.

SEC. III. OFFICERS.—The officers of this Association shall be a President, two Vice-Presidents, a Secretary, an Assistant Secretary, a Treasurer and a Railroad Secretary, whose duty it shall be to make arrangements for the rate of transportation of members of this body; and these officers shall constitute an Executive Committee.

Term.—All officers shall serve for a term of one year.

Election.—The election of the foregoing officers shall be by ballot, and any member may place a name in nomination for any office, provided, however, that no nominating speeches shall be permitted, and that if no person shall receive a majority of the votes cast for any office upon the first four ballots, at each ballot thereafter the name upon the list receiving the lowest number of votes shall be dropped, and so on until the majority of the votes shall have been secured by one candidate; and this election shall take place at the opening of the afternoon session of the second day of the winter meeting.

SEC. IV. DUTIES AND POWERS OF THE EXECUTIVE COMMITTEE.—It shall be the duty of the Executive Committee to fix the time of holding general meetings of the Association, to prepare programs, to procure attendance of lecturers and other speakers, and to make all the necessary arrangements for the meetings.

Indebtedness.—They shall not incur any indebtedness in excess of the funds in the hands of the Treasurer.

Vacancies.—They shall have power by majority vote to fill all vacancies in office occurring between meetings of the Association.

Annual Report.—They shall make to the Association, on the last day of its winter meeting, an annual report of its finances and membership, which report shall be submitted in writing.

Order of Business.—The Executive Committe shall have power to arrange the order of business at all meetings; provided, that reports of standing committees shall be heard on the afternoon of the second day of the winter meeting.

SEC. V. MEETINGS. There shall be a general meeting during such days as the Executive Committee shall determine, at a point to be determined by the vote of the Association, in the same manner as heretofore described for the election of officers, so that the claims of each city to consideration may be presented by one speaker, who shall not occupy more than five minutes; and the Executive Committee may call a second meeting in June or July, at such place as they may determine.

SEC. VI. CLAIMS.—All claims against the Association shall be paid by the Treasurer upon the order of the President, countersigned by the Secretary. Whenever the Treasurer shall doubt the validity of any claim, for which an order on the Treasury may be presented, he may submit the same to the Executive Committee.

SEC VII. AMENDMENTS.—This Constitution may be amended or altered, provided at least one day's notice, in writing, embodying the amendment, or amendments, to be made, be given in open session of the Association; and, provided further, the same shall be approved by a two-thirds vote of the members present, which vote shall be taken not later than the next to the last day of the general session.

SEC. VIII. COUNCIL OF EDUCATION.—The Advisory Body of this Association shall be composed of fifteen members, who, together with the State Superintendent of Public instruction, shall constitute the Council of Education. Its duty shall be to consider and report to the general body the desirability and means of securing reform in educational legislation and practice.

The term of office for members of this Council shall be five years; provided, however, the first list of members shall be appointed by the President of the Association immediately upon the adoption of this section; three to serve for one year, three for two years, three for three years, three for four years and three for five years; and annually thereafter three members shall be appointed by the Executive Committee of the General Association to serve the full term of five years. The Executive Committe shall also have power to fill all vacancies occurring in the Council between the meetings of the Association; the appointments so made to be subject to the confirmation of the General Association at its ensuing meeting.

And it is further provided that the President of the Association shall, in appointing the list of members, designate the State Superintendent as Temporary Chairman, and shall also designate a Temporary Vice-President and Secretary, and these three shall act as Temporary Executive Committee of the Council, prepare its first program, and serve until a permanent orgaization is perfected.

The first meeting of this body shall be held in the month of July, 1892, at a time and place to be designated by the Executive Committee of the Council herein provided for, and thereafter the Council shall meet semi-annually, alternating its sessions between the cities of Oakland and Los Angeles.

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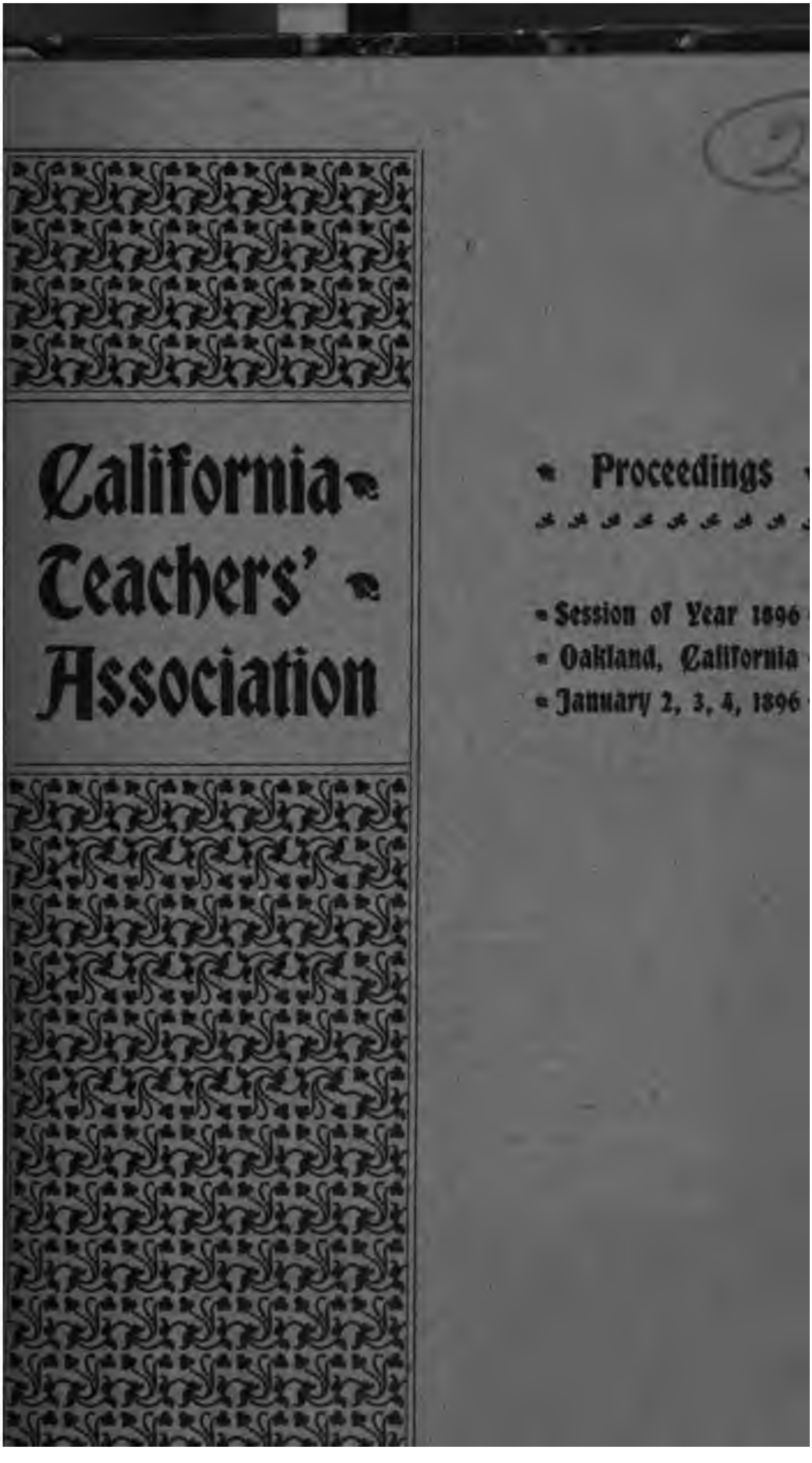

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Session of Year 1896
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.. PROCEEDINGS ..

OF THE

CALIFORNIA TEACHERS' ASSOCIATION

SESSION OF YEAR 1896*

⁂

HELD AT

OAKLAND, CALIFORNIA, JANUARY 2, 3, 4, 1896

⁂

SAN FRANCISCO:
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1896

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*In order not to infringe upon the holidays, it was thought best to hold what should have been the session of 1895, early in 1896.

ANNOUNCEMENTS

●

The next meeting of the California Teachers' Association will be held Dec. 28, 29, 30, 1896, at San Jose.

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FIRST DAY.

Thursday Forenoon, January 2, 1896.

THE TWENTY-NINTH ANNUAL MEETING OF THE CALIFORNIA TEACHERS' ASSOCIATION commenced its sessions in the Oakland High School building, Oakland, January 2, 1896.

The Association, including the Alameda County Teachers as a body, was called to order in the High School Gymnasium at 9.30 A. M. by President Earl Barnes, Superintendent Garlick of Alameda having previously explained that it had been thought advisable to combine the Alameda County Institute with the State Association, of the same date, one program to answer for both.

The song America was rendered by the audience, standing.

The forenoon having been set apart by the Executive Committee for the hearing of reports from the Council of Education, State Superintendent Black, as president of that body, was invited to preside over the deliberations of the morning.

Papers were read by the following: J. W. Linscott, Santa Cruz; Fernando Sanford, Stanford University; Geo. H. Howison, University of California.

THE COURSE OF STUDY FOR ELEMENTARY SCHOOLS.

SUPT. LINSCOTT.

Your committee, appointed at the meeting of the State Council in Santa Cruz, December 28, 1894, to consider the question of a uniform course of study for the elementary schools of this State, begs leave to present the following report of progress:

It was apparent from the outset that the task assigned to this committee was a difficult one. Probably no one who has seriously studied the problem feels competent to give a final answer to all or nearly all of the perplexing questions it suggests. Yet it seems clear that, even in the present unstable condition of educational thought, a decided improvement of courses now in use is possible. In particular, courses which may have been framed with reference to one or two controlling ideas can hardly fail to receive advantage from an all-round consideration of the subject from various points of view. An eclectic course, taking indiscriminately, a little here from one school of thought, and a little there from another, is certainly not desirable; but a course framed deliberately and with definite purpose, after a broad and catholic examination of the subject, is eminently to be desired.

Your committee does not interpret its commission as requiring it to prepare a course, complete in all details. We submit that a course that should be absolutely uniform for all sections of this great State could not be the best course for all sections of the State. Yet we believe that a far-reaching unification of courses is both desirable and possible. It is only in minor details that a good education for a child in Siskiyou county differs from a good education for a child in San Diego county. An examination of the courses of study now in use in the various counties and cities of the State shows less of fundamental difference among them than is sometimes supposed to exist. In two respects this State has especial advantages as regards the unification of courses of study. The same series of text-books is in use in all of our public schools; and the schools of each county are organized and conducted under a uniform curriculum, prepared in each case by the County Board.

However, it seemed best to your committee not to prepare at once even the outline of a course of study, and propose it for general adoption in the counties and cities of the State. We realize the fact that the course of study is not the real educator; the teachers in our schools are the real educators, and the course of study is intended to serve as a guide and help to them. To accomplish its true purpose, the course of study must be so inwrought with the educational thought and purpose of the teacher who is to administer it that teacher and curriculum shall together constitute a compact unit of educational influence. To impose upon the schools *ab extra* a course of study, no matter how good in itself, would be to encumber our educational David with the armor of Saul.

What is desirable is a course deeply rooted in the educational consciousness of the State—a course in process of healthy growth and not an article of manufacture. With these considerations in mind, the committee proposed a plan of procedure which should extend over several years; which should enlist the coöperation of all of the teachers of the State; the progress of which should be indicated by a series of annual reports, each one going further into the subject than did its predecessor. For the year 1895, the following definite plan was proposed for securing the coöperation of the teachers of the State: That all city and county superintendents of schools be invited to set apart at least one half-day of the teachers' institute for the year, to be devoted to the discussion of certain questions proposed by the committee; that the results of these discussions be summed up in some form of statement to be transmitted to the committee; and that previous to the assembling of the institute, and also following thereafter, all of the teachers be requested to devote as much time and thought as possible to the study of the problem proposed. Especial emphasis was laid on the importance of this thorough study on the part of the teachers, and a number of works were suggested for reading, especial emphasis being laid on the reports of the Committees of Ten and Fifteen. The teachers were moreover asked to observe carefully the children in the schools, with a view to a better determination of the actual effect and relative value of the several studies. Every effort has been made to secure the formation of intelligent opinion rather than the advocacy of preconceived notions.

As a guide to study and discussion for the year, the following seven questions were proposed:

1. Of the four great branches of study enumerated by the Com-

mittee of Ten, viz.: Language (including Reading, Writing, Language Lessons, and Grammar), Mathematics (including Number Work, Arithmetic, etc.), History (including Literature and History proper), and Natural Science, should all be studied in each of the elementary grades?

2. If any are to be omitted in any of the grades, which, and in what grades?

3. If all should be pursued, what proportion of time should be given in each grade to each of the four branches?

4. Can any one study be designated in each of the grades which should be regarded as the chief study of that grade?

5. Should any one of the four great branches receive a notable increase of attention over that which it now receives in the practice of the schools?

6. How far and in what way should the natural tastes and aptitudes of the children be taken into account in determining the work of any given grade?

7. How far and in what way should the work be determined by the prospective life-work of the children?

These questions and suggestions were all embodied in a circular addressed to school superintendents and county boards of education of the State of California. The closing paragraphs of this circular read as follows: "If the plan here proposed meets with your approval, may we ask you to present it to your teachers, and enlist their hearty coöperation in carrying it out? Will you kindly send us within one week of the close of your institute a copy of any statement or resolutions bearing upon the subject which your teachers may have adopted? We should be particularly pleased to have added to such expression of the views of your teachers an expression of your own views upon the subject. It is our purpose to embody the results of our inquiry in a preliminary report, to be presented at the meeting of the Council of Education next December, and to be made the basis of discussion for the year following. In counties and cities where the institute for the current year has already been held, we would suggest that the attention of the teachers be called to these questions, and preparation be made for their discussion in the next institute; but that in the meantime the superintendents and county boards send us an expression of their own views in response to these inquiries, to be embodied in the December report."

"The committee has not been authorized to incur so great an ex- ise for printing and postage as would be involved in sending a copy this circular to all the teachers of the State. We should esteem it a at favor if superintendents would undertake to send out from their n offices a circular embodying the whole or the chief part of the tter here presented."

Copies of this circular were sent also to a number of the leading ucators of this State and of the East, and expressions of their views licited.

The remainder of our report falls naturally into three divisions: A summary of the responses to this circular. II. Such discussion the questions proposed as the committee is prepared to present. I. Definite proposals for the continuance of the inquiry.

I. SUMMARY OF RESPONSES TO THE COMMITTEE'S CIRCULAR.

From beyond the Mountains, we have received letters relating to e subject under consideration from Mr. J. M. Greenwood, Superin- ndent of Schools, Kansas City, Mo.; Prof. B. A. Hinsdale, of the iversity of Michigan; Prof. Charles A. McMurry, of the Illinois ate Normal University; Principal Francis W. Parker, of the Cook unty Normal School, Chicago; Principal E. A. Sheldon, of the State rmal School, Oswego, N. Y.; and Dr. Emerson E. White, of Co- nbus, O. We present herewith the text of these six letters:

SUPERINTENDENT GREENWOOD.

Mr. Greenwood writes as follows:

"I will reply to your questions seriatim:

"1. In the elementary grades all the four great branches should be studied, not with equal stress. Small pupils can do little with the third group. The phasis should fall on the first and second, and the fourth should be worked chiefly through geography. History and geography are so closely related t they may be treated together, in part. What literature is introduced should with reading.

"2. In the first, second, third, fourth, little can be done in either literature history. The literature must be learned chiefly from the reading books in all nmon school grades, and history from easy biographical narration till the sev- h year. In the grades below the sixth or seventh, I think it should be intro- ced incidentally rather than purposeful. Young children, as a rule, can read aple biography, but not history, to an advantage. A great danger to be avoided hat of introducing too many studies. Mental anarchy ensues in that case, and learner's powers are weakened.

"3. The greatest amount of time should be given to the first group; the st to the third, and about equal time to arithmetic and geography.

"4. Yes; I think so.

"5. Only in exceptional or degenerate cases, should there be a difference. Besides, I would include in the course music and drawing.

"6. In reply to this question, I do not see how any one can tell at this stage of the learner's progress what will be best in a special line of work. I am clearly of the opinion that specialization should not take place, unless the learner is a genius or has a tendency toward insanity, below the third year in the high school."

PROFESSOR HINSDALE.

Professor Hinsdale writes as follows:

"I make such answers to the questions contained in the circular that you have sent me as the demands upon my time and energies permit. If I were to elaborate my ideas fully, I should not conclude until I had finished an xtended dissertation.

"1. I answer this question in the affirmative. It must be distinctly understood, however, that the work, in all the branches of study named, must be carefully adjusted to the capability of the pupil. This is a particularly important observation in respect to some of the studies or divisions of studies. Of course, formal history and formal natural science cannot be taught in the first grades, but the same kind of stuff that is afterwards used in the elaboration of formal history and formal science.

"2. This question has been answered by implication above.

"3. This question I am unable to answer in set terms. I have not worked out a careful distribution of the time of the school day, and cannot now undertake that problem. In general, the things that are taught in schools may be divided into two classes: The elementary school-arts, such as reading, penmanship, drawing, composition, the elements of arithmetic, and singing, and the studies proper, such as history, literature, science, and mathematics, properly so called. What I call 'the elementary school-arts' are instruments or tools, and my judgment, based on considerable observation and reflection, is strong to the effect that in the early grades they should be emphasized, though not by any means to the exclusion of reality or subjects proper.

"4. To some extent an answer to this question is involved in my answer to question 3. I believe in 'concentration' when I am allowed to define it, but have never been persuaded that the highly technical ideas propounded by some pedagogists in relation to that subject are true or useful. I am hardly prepared to answer the question in the affirmative as it stands. But a particular study should receive more attention in some grades, and in some grades less. Thus, in my view, the language-arts, speaking, reading, and composition (called, perhaps, 'language') should be very prominent in the beginning of the elementary school course.

"5. History and natural science would bear more emphasis in the elementary schools than they at present receive. I use the term 'history' in the sense of the question, including literature and history proper.

"6. The work of any and every grade should have primary reference to the natural tastes and aptitudes of children, using that language in a rational sense. It is not my observation, however, that children who fall into the earlier school

ades really differ very widely in what may be called natural tastes and aptitudes.
a rule they are interested in about the same things. There is not in my view,
erefore, any great difficulty in making up courses of study that shall meet these
tes and aptitudes. My observation is that any child who may properly be
lled normal can be interested, as a rule, in any work that we have any business
put in the lower elementary grades. In the decided sense of the terms, 'natu-
tastes and aptitudes' of children declare themselves later than the years with
ich we are here dealing. Of course some difference is observable at an early
e in particular cases

"7. The prospective life work of children, using that language in a broad
se, ought to determine the work that is done in the elementary schools alto-
her. School education should be a fitting for life work. At the same time,
ildren generally need the same preparation in their early school experience.
ecialization of studies, based upon narrower ideas of prospective life work,
uld be deferred until the elements or fundamentals of education have been
ght. All children in the United States, no matter where they live, need to
dy language, they need to study mathematics, they need to study history, they
ed to study natural science, and their prospective differences of life work are
t such as to require or to justify specialization of instruction until a consider-
ly advanced stage has been reached in the schools. I am in favor of introdu-
g Latin as an elective into the grades as early as the seventh year, and possibly
me other work that is now done in high schools, provided it can be done with-
t friction. Beyond that I see no necessity for specialization in studies below
e high school, as growing out of question 7."

PROFESSOR McMURRY.

Professor McMurry's communication is as follows:

"The following answers are submitted to the seven questions in the circular:

"1. Yes.

"2. In the lower grades the studies are not so distinctly isolated from each
ther. The studies differentiate themselves more and more from each other as
e advance in the grades. In the first and second grades it is more difficult to lay
ut a definite course of lessons in natural science and literature as clearly distin-
uished from the other studies, than in higher grades. It may be well to omit
umber work in the first half of the first grade, although some number exercises
ay spring up incidental to the other studies.

"3. The following division of time among the studies is suggested ·

Reading. One recitation daily.
Arithmetic. One recitation daily.
Natural Science. One recitation on alternate days.
Literature or History. One recitation on alternate days.
Language lessons and Grammar on alternate days.
Geography on alternate days (3d, 4th, 5th, 6th, and 7th grades).
Writing on alternate days.
Drawing on alternate days.

"This programme may be modified somewhat in the primary grades and in
he grammar grades, but it serves for a general average.

"4. No. The principal studies seem to hold about the same relative importance throughout all the grades.

"5. Yes. History and Literature should find a much more abundant use in our common schools, especially the best of American writers and historical narratives. This should be true both in the reading lessons and in history and literature lessons in all the grades.

"Natural Science also should be taught more systematically according to definite outlines in every grade. As yet, however, no well defined course in Natural Science studies has been worked out for the use of teachers. In order to give these studies their proper time and place in the school programme, two things will be necessary; first, to curtail the time now given to some of the other studies; second, to reduce several of the studies to half time with recitations on alternate days.

"6. So far as children generally show certain natural tastes and aptitudes at a given age, the materials of instruction should be adapted to these conditions. We should give the children in any grade instruction in which they can take a strong and lively interest. The theory of the Culture Epochs suggests a criterion with which to determine the suitableness of materials for any given age.

"7. The course of study in the common schools through the eight grades should not be influenced by the particular occupation or life work which awaits them. In the common schools children should be taught those things of universal value to all, no matter what their life business may prove to be."

COLONEL PARKER.

The following answers have been received from Principal F. W. Parker:

"1. All the branches here enumerated should be used as means of developing the character of children, from the first to the eighth grade inclusive.

"2. See answer to first question.

"3. The only possible guide to regulate the proportion of time would be found in the effect of the subjects upon the lives of the children. This question, then, can only be answered by long and careful application of all the subjects.

"4. We do not, at present, know enough of the effect of the different subjects to assign any one study the most prominent place. All we really study is life, and the laws of life. We study man and nature, and we must have far more experience than at present to know the effect of these two main branches of one subject, and to decide which has the strongest influence in the development of character.

"5. The central or main subjects may be designated, as: geography, geology, meteorology, mineralogy, physics and chemistry, botany, zoölogy, anthropology, ethnology and history. Reading, observation and hearing languages, are *processes of thinking*, and therefore, in this sense, not subjects of thought, but ways of thinking. Mathematics, for instance, form, geometry and number, are modes of judgment. These modes of judgment must be properly exercised by attention to the central subjects. The modes of expression are not subjects in themselves; they are, on the intellectual side, means of enhancing thought power, and on the moral side, of developing the motive in the child. The great resources, then, for study, are found in the central subjects, and all other subjects are means to an end. Literature cannot be regarded as a subject in itself; it is a means of thinking.

"6. Psychology, which gives us a knowledge of a being, including nature, tastes and aptitudes, must in itself determine the subjects to be presented, and the direction of these subjects; for instance, a child is a social animal, and the direction of all mental and moral action must be towards the organization of society. We have, then, three things, the end and aim of education, or organization of society, the being that moves toward that end,—the child,—and the central subjects which influence that movement.

"7. The highest life work of all human beings is the organization of community life, and this should be the end and aim of all education. Whatever comes in as a factor in the movement of community life to a higher level, should be put into the school.

"In conclusion, all education must be thoroughly reformed, if not revolutionized, in the direction of the organization of society. Here we find a direct purpose for all mental, moral and physical action of the children, and under this ideal we are to study education. A school is society shaping itself."

DR. SHELDON.

The following letter has been received from Dr. Sheldon:

"I have your letter of the 15th inst. In answer I would say that we have been studying this subject of a course of study for the elementary grades in our own faculty for the last three years. We have come to some conclusions in regard to some things, and hope before long to express our conclusions in published form. The only doubt about it is whether when we get to the end we may not change our minds and want to revise the whole thing, a condition that is very likely to exist. I am very sure that any statement we may publish will be subject to frequent revision. I will state as briefly as possible my own idea as to the proper grouping of subjects in any well arranged course of study.

"I believe the object of all study should be to know God and obey Him. How can we know God? By studying Him through His works. What are His works? We have but two groups of created objects, so far as I can understand, one a material group, and the other immaterial. The material group includes the animal, vegetable and mineral kingdoms. The immaterial group—I hesitate what to say, but am sure that this includes human souls. Beyond this I am in some doubt, but for the purpose in hand this grouping will aid us. In studying material objects we consider the form, size and relation of the objects studied. These constitute the elements of geometry. We also get ideas of color, weight, motion and the general qualities of the objects studied. In these we have the elements of physics and chemistry, and the arts. We gain also the idea of number, which is the foundation of arithmetic and algebra. We consider the location, an important element in geography. In sound we have the elements of music.

"In psychology, the spiritual side of creation, we study the motives, the feelings, the emotions, the actions, the movements of the human soul. In studying history and literature we are studying in this line. This gives us, as you see, two groups of study; one, the material objects of God's creation, the other the immaterial objects. These may be properly termed thought subjects. Having ideas which we gain from these objects we wish to express them. For this purpose we employ what we term language. Now, language may be arranged in four groups.

"1st. That which expresses through the body, or pantomime, which includes gesture and elocution.

"2nd. Signs and symbols, as used in mathematics.

"3rd. We express through art, as in drawing, painting, modeling, sculpture, music.

"4th. By oral and written expression, as in reading, writing, spelling, rhetoric, etc.

"This you will see arranges all our studies in three great groups; first, the study of material objects; second, immaterial objects; and third, the language which we use in the expression of ideas gained in the study of these objects. If I am right in the arrangements I have indicated, then, of course, all these subjects must be carried on together from the very beginning in our schools. Nothing can be left out in any part of the course. The thought studies, of course, come first, and the expression follows naturally. At the beginning of the course I see no necessity for making the third, or language group, a special object of study. The children get ideas from their studies in science and literature, and simply give expression to those ideas. Their education in language comes from their effort to express themselves. I would therefore at the beginning of the course give little or no attention to language studies, as such. I would simply allow the children to express themselves in the most natural way. They express themselves in bodily action, in drawing, in painting, and in oral speech; and I would allow them to freely use these forms of expression, feeling confident that in their use they would get facility after awhile. It may be best, I think it is, after a little, to take some of the expressive subjects as branches of study for the purpose of giving greater facility of expression. I think this is particularly true in number. There is hardly sufficient opportunity for exercise in number in our main lines of thought work to give that readiness and accuracy of expression that is necessary. When they get out into life, there must be an almost automatic readiness to re pond in mathematical calculations and expressions. Such readiness, I believe, would not be acquired without some special drill. I think, however, the inclination is to begin this study too early in the course. I would allow the expression to grow with the children as they find occasion to use this form of language, as, for instance, in drawing, in pantomime, and oral speech. Exactly the time when it is best to begin this special study of mathematical expression I am undecided, except to say, that I think it ought not to come into the first year of the primary school. The reading, I believe, is begun too early, also. The first step is to gain ability to use the senses quickly and accurately, and to give ready expression to the ideas gained in the use of the senses. This is more important to the child than it is to learn to read. It is, in fact, better that he should get his ideas from the study of the real objects, than to get them from the printed page. There is more education in it. For this reason I would put off the reading work to a later date. If you ask when I would have them begin to read, I cannot tell you. This must depend something upon the advantages of the children, upon their previous training, upon their capabilities. I think, however, I would not begin during the first five months of the child's school life. The drawing, I believe, should begin with the oral expression. Later, certainly not within the first year, they may begin to write. Writing is more difficult than drawing; drawing is more natural to children. The drawing I would have with color, with a brush, put on in a free way. Instruction in drawing, that is in principles or methods of work, ought not to be allowed to interfere with the freedom of the children in expressing themselves. If formal instruction were given, it would be sure to interfere. I believe such formal instruction should not be given at any rate during the first three years of the children's school life. I am not sure as to the best time to begin. In spelling I would never have any formal instruction. They spell as they write, only be careful that they never spell words incorrectly.

"Geography includes all the sciences, and in all this nature study and literature and history we are preparing for the more formal study of geography, and it should come later in the course. If you ask me when to take it up, I must answer as in the other cases—I do not know. This depends upon so many conditions that I could only answer knowing such conditions. I send you inclosed a sort of tabular view of the grouping I have indicated.

"I realize that in this brief way I have very imperfectly expressed my own ideas in regard to this great subject. I am sure you will consider it very unsatisfactory. It is unsatisfactory to myself, but from it perhaps you will get some idea as to the thought that is in my own mind in regard to the proper grouping of studies. I am very glad to contribute in any small degree to the great work you are doing in California in the department of education. I think you are doing more than any other State in the Union. We all look to you for the best that is being done in educational work. I trust you will do me the kindness to send me, from time to time, the reports that may be published in regard to your proceedings. Since my visit to California, my interest in your great State has been highly augmented, and I am especially interested in your educational movements. I hope I may be able to keep in touch with them. Let us both give and take."

DR. WHITE.

Dr. E. E. White writes as follows:

"I am pleased to learn that the State Council of Education of California has undertaken so thorough an investigation of the course of study for elementary schools, but may I express my surprise that this investigation is to be put upon the imperfect basis of the report of the Committee of Ten—a committee not instructed to investigate elementary instruction, and, I may add, a committee not well qualified to make a guiding report upon the subject? The *elementary* course of instruction is the weak feature of this suggestive report. Much of it I cannot accept. I will send you in a few days a review of the portion relating to arithmetic.

"The enumeration of the branches that should constitute the elementary course is obviously *defective*. It does not, for example, include drawing or manual construction of any kind, and is silent respecting instruction in *duty and manners!* The attempt to make history include literature proper, and natural science geography, is an illustration of the confusion into which the elementary studies are thrown by the attempt to divide them into *four branches*.

"It is impossible for me to answer the committee's questions intelligently on the basis proposed. What is meant by *literature as a branch of history?* Why does not reading more properly include literature? What are the children to read? Does not reading include *what is read?* Again, what is meant by 'grammar'? If the science of language, or technical grammar, is meant, it clearly does not belong *below* the seventh school year.

"Were I to discuss the questions proposed, I should wish to make a somewhat different classification of the elementary branches. I should wish to use terms that have a definite and well-understood meaning. I would call a spade a spade, and not a machine.

"But let me give a *hint* on several of the questions.

"1 and 2. Grammar proper should not be taught in the first six years. The time for language in these grades should be devoted to the *art* of language, and the training should be *synthetic*. History *proper* has no place in the first years of the course. I do not call stories, myths, and biographies (such as are told children) history. Lessons on plants and animals (facts of observation) should be given early; but are these *facts*, as taught the first three years of school, natural *science?* Have the Indians a knowledge of the natural *sciences?* What is the distinction between *common* knowledge (the result of common observation) and *scientific* knowledge? What is meant by the *scientific phase* of school instruction?

"You see that we must define our terms before we attempt to make statements as a *basis of pedagogy*. The present tendency to use vague, comprehensive words is confusing pedagogical discussion.

"3. What is said above applies to this question. Language and mathematics, as defined, should be taught in all grades. The terms 'History' and 'Natural Science' are too indefinite, as here used. We judge that the proportion of time will vary in the different grades.

"4. If by *'chief'* study is meant the study that receives most time and attention, clearly language, as defined, should be made the chief study. If by 'chief' is meant central and *inclusive*, no one of the elementary branches is in this sense a 'chief study.'

"5. I am inclined to think that nature studies, not necessarily natural *science*, should receive an increase of attention; also history and literature in the proper grades. But the studies just now needing special emphasis are 'morals and manners' and the art studies—not included in the 'four great branches.' The schools should put character before learning.

"6. The natural tastes and aptitudes of children *as a class* should, of course, be taken into account in determining the work of each grade. 'School instruction, both in matter and method, should be adapted to the capability of the learner,' is a sound principle of pedagogy. The learner's capability includes natural aptitude and taste; but the question may refer to those *individual* aptitudes and tastes in which pupils differ. I know of but one way to determine a child's aptitude and taste for a given study, and that is to teach him at least its elements. A child's taste for anything depends somewhat on his *knowledge* of that thing. Of course, a child can show neither taste nor aptitude for that of which he is entirely ignorant. In brief, a child's tastes and aptitudes cannot be divined *de novo*. His dislike for a study that he is pursuing, may be due entirely to his approach to it or the manner in which he is taught. In my judgment, there is a large amount of nonsense current on the following of the individual tastes and aptitudes of young pupils. 'If the blind lead the blind,' where will both fall? It is vastly more important to know the *common* tastes and aptitudes of children in school instruction than to know their individual tastes and aptitudes which are changing from term to term. No course or method of instruction can be based on the *differences* of pupils in the same class or grade. These differences are met by modifications or adaptations of the general method to the individual pupil.

"7. The work of the school should be chiefly determined by the fact that its chief end is manhood and womanhood. Duty is the great life-work of man. School instruction should not be determined by the prospective pursuits or occupations, and, for one good reason, no one can possibly guess the future trade or pursuit of a young child. School training should be 'an apprenticeship in right living,' as the French Programme puts it, and a *general preparation* for all pursuits and callings. You do not wish me to give an opinion on the extent to which the State may provide *special* schools to teach given trades. I take it that the question relates to *general* education—the education provided for all youth.

"Please excuse any dogmatism that may appear in the above answers. Opinions, if real opinions, are liable to be positive, if not dogmatic."

IN CALIFORNIA.

The tables given below summarize expressions of opinion relative to the elementary course of study, which have come to the committee in the following forms:

a. Resolutions adopted at the institutes of the following counties: Humboldt, Kern, Sacramento, San Joaquin, San Luis Obispo, Santa Clara, Santa Cruz, Stanislaus, Tehama;

b. A tabulated summary of the views of 100 teachers of Monterey county, prepared by Mr. J. B. Hickman;

c. A tabulated summary of the views of 215 teachers of the city of Los Angeles, prepared by Mr. W. O. Lowe;

d. Letters from the following individuals:

From Oakland: Superintendent J. W. McClymonds; Mrs. M. J. Ayres, Mrs. Sarah B. Byrod, Misses M. Burrows, Bertha Feibush, C. N. Gibson, C. E. Reed, Flora R. Smyth, Stella G. Trask, and A. L. Zabel, of the Clawson school; Miss H. M. Mullen, of the Harrison school; Miss A. F. Aldrich, of the Lafayette school; Miss Elizabeth Powell, of the Grant school; Mrs. Ellen Gibbs, of the Garfield school.

From San Rafael: Miss McAllister.

From the State Normal School, Los Angeles, Dr. Edw. T. Pierce.

From the University of California: Mr. Frank Dunn.

As might be expected, the reports from different quarters vary considerably in the form in which they are presented. Some of these differences necessarily appear in the summary as here given. Very few of the reports gave direct and unqualified answers to the seven questions asked. The qualifications and explanations added much to the value of the reports; they added, too, to the difficulty of tabulation. The attempt has been made to incorporate into the tables every idea explicitly set down in the material at hand. A word or two of caution in regard to the interpretation of the tables seems necessary.

1. As noted above, some of the respondents have qualified their answers in various ways; for instance, by a change in the definition of the terms used in Question 1.

2. It is possible, in some cases almost certain, that qualifications of replies, similar to those which some have explicitly stated, existed in the minds of respondents who have not expressed them. The tables summarize the received replies at their face value.

3. Opinions not really at variance may appear to be so, because they have been expressed by persons laboring under very different conditions. In fact, it will be impossible to understand fully any of the answers to Question 5 without knowing the exact historical view upon which it is based.

4. Several respondents have expressly mentioned geography. Some classify it with the History group, others with the Natural Science. Doubtless all from whom replies have been received had geography in mind; but in cases where it is not mentioned, it is impossible to tell just what place has been assigned to this branch. The form of the question proposed was not such as to obviate this ambiguity.

5. It is quite evident from the tables that the allotment of more time to one subject than to another is not always intended to imply that the former possesses greater educational value than the latter.

6. Some respondents replied to only a part of the questions. Any attempt at averaging replies on the basis of the total number of replies as given above would, accordingly, be misleading.

7. It goes without saying that the committee makes no attempt to settle any question by a majority vote. This summary has a value, however, as indicating the present drift of educational opinion in the State.

The questions of the committee are answered as follows:

QUESTION 1.

Yes: Humboldt, Kern, Sacramento, San Joaquin, San Luis Obispo, Santa Cruz, Stanislaus, and Tehama counties; 45 per cent. of the teachers of Los Angeles; 60 teachers of Monterey county; Ayres, Burrows, Byrod, Dunn, Gibbs, Gibson (as far as possible), McAllister. McClymonds Pierce, Reed, Zabel.

QUESTION 2.

Technical grammar omitted in first six years: San Luis Obispo county; McAllister.

Grammar omitted in all elementary grades: Aldrich.

All but language omitted in first grade: 1½ per cent., Los Angeles.

Mathematics omitted from the first grade: 3, Monterey county; Aldrich (also from half of second grade), Pierce;—from grades two to five, seven, and eight: each one teacher of Monterey county.

Number omitted from first grade: 44 per cent., Los Angeles; Feibush, Mullen, Powell, Trask (may be omitted without disadvantage).

Number from first and second grades: 8 per cent., Los Angeles; Smyth.

Abstract number work from the first two years: Gibbs.

History from the first grade: 8 per cent., Los Angeles; 8, Monterey county; Aldrich (also first half of second grade), Powell.

History from the first and second grades: 4 per cent., Los Angeles; Powell;—from the first three grades: 10 per cent., Los Angeles.

History (proper) from all primary grades: Mullen;—from the first four grades: 5 per cent., Los Angeles;—from the first five grades: 5 per cent., Los Angeles;—from the first seven grades: 2 per cent., Los Angeles.

In addition to those already enumerated, teachers of Monterey county would omit History in specified single grades as follows: second grade, 7; third grade, 5; fourth grade, 2; fifth grade, 1.

Natural Science from the first grade: 3 per cent., Los Angeles; 7, Monterey county;—from the second grade: 24, Monterey county;—from the third grade: 21, Monterey county;—from the first three grades: 4 per cent., Los Angeles;—from the fourth grade: 18, Monterey county;—from the fifth grade: 7, Monterey county ·—from the first five grades: 5½ per cent., Los Angeles.

QUESTION 3.

Carefully prepared tables of time allotment have been sent in, both by counties and by individual correspondents. It would be a very difficult matter to sum up all of these tables in one, and very little would be gained from such a summary. We select, accordingly, two examples, which may serve as representatives of the whole number. The first is that prepared by the Santa Cruz County Institute:

	Primary Grade. 1st, 2nd, 3rd Yrs.	Intermediate. 4th, 5th, 6th Yrs.	Grammar. 7th, 8th, 9th Yrs.
Language	½ of the time	⅓ of the time	¼ of the time
Mathematics	⅙ "	¼ "	¼ "
History	⅙ "	⅙ "	¼ "
Science	⅙ "	¼ "	¼ "

The second was prepared by the joint institute of the city and county of Sacramento. The numbers represent the per cent. of the whole time given to the group of studies indicated:

GRADE.	LANGUAGE.	HISTORY, (including Literature).	ARITHMETIC. (Numbers).	NATURAL SCIENCE, (including Geography).
1	85	5	5	5
2	50	20	15	15
3	50	15	25	10
4 and 5	50	15	20	15
6 and 7	40	15	25	20
8 and 9	35	20	25	20

The Institute of Kern county did not think it advisable to make any specific allotment of time, but presented suggestions regarding the proper treatment of Nature Studies, Mathematics, and History.

The Institute of San Joaquin county concurred in the main with the tabulated apportionment of time given in the report of the Committee of Fifteen. The points of difference are set forth in a table published, together with the remainder of the report of the same institute, in the *Pacific Educational Journal* for December, 1895.

QUESTION 4.

No: Kern, San Joaquin, Santa Cruz, and Stanislaus counties; 16 per cent., Los Angeles; Dunn, Gibbs, Trask.

None in the ninth grade: Tehama county.

None in the last four grades: Santa Clara county.

Language throughout the grades: Sacramento and San Luis Obispo counties; 55 per cent., Los Angeles; 14, Monterey county; Aldrich, McClymonds, Pierce.

Language in the first grade: Smyth;—in the first three grades: 9 per cent., Los Angeles;—in the lower grades: Ayres, Byrod;—in the primary grades: Feibush;—in the first four grades: Burrows Zabel;—in the first five grades: Santa Clara and Tehama counties;—in the first six grades: Gibson;—in the first two grades, Language in the grades above, Language with Literature: Mullen.

Reading in the first and second grades: Powell;—in the second grade: Smyth;—in the first four years: Humboldt county;—in the primary grades: 13½ per cent., Los Angeles.

Language and arithmetic throughout the grades: 2½ per cent. Los Angeles.

Mathematics in the third and fourth grades: Reed;—in the sixth and seventh grades: Tehama county;—in the ninth grade: Palmer.

Number in the fourth and fifth grades: 9 per cent., Los Angeles.

Arithmetic in the fifth, sixth, and seventh grades: Humboldt county.

History in the last four years: McAllister;—in the eighth grade: Tehama county.

Literature in grades 8 to 10: Humboldt county;—in the seventh and eighth grades: 9 per cent., Los Angeles; Gibson;—in the eighth grade: Smyth.

Natural Science in the first five years: McAllister;—in grades five to eight: Zabel.

Science and History coördinated: Palmer.

QUESTION 5.

Yes: 3 per cent., Los Angeles.

None: 13 per cent., Los Angeles; Byrod, Powell, Trask.

Language: Sacramento, San Luis Obispo, and Santa Cruz counties; 55 per cent., Los Angeles; 18, Monterey county; Ayres, Gibson. Pierce.

Mathematics: 4, Monterey county; Dunn.

Mental Arithmetic: 1½ per cent., Los Angeles.

History: Humboldt, Kern, Sacramento, San Joaquin, Santa Cruz, and Stanislaus counties; 9½ per cent., Los Angeles; 8. Monterey county; Dunn, McAllister.

Literature: 3½ per cent., Los Angeles; Pierce

Geography: 1 per cent., Los Angeles.

Reading: 6 per cent., Los Angeles. Oral Reading: Mullen.

Natural Science: Humboldt, Kern, San Joaquin, San Luis Obispo, Santa Cruz, Stanislaus, and Tehama counties; 9½ per cent., Los Angeles; 37, Monterey county; Aldrich, Burrows, Dunn, McAllister, McClymonds, Smyth, Zabel.

Observation work in nature study: Gibbs.

QUESTION 6.

Yes: San Joaquin and Stanislaus counties; 9 per cent., Los Angeles; (as far as possible, 3 per cent., Los Angeles); 19, Monterey county; Aldrich, McAllister.

Yes, if the question means by tastes and aptitudes, those peculiar mental qualities which, according to the laws of mental development, characterize children's mental attitude at various stages : Sacramento and Santa Cruz counties; 6 per cent., Los Angeles; Ayres, Dunn, McClymonds, Reed.

No: Humboldt (except in rare cases of special talent), Kern (special tastes to be encouraged, but not to the detriment of other work), and Tehama counties; 30 per cent., Los Angeles (in lower grades); 1 per cent., Los Angeles (except in high school work); 48, Monterey county; Burrows, Byrod (under class system), Gibson, Mullen (under the system of a single course of study for an entire city), Powell and Trask (under class system), Zabel (except in cases of rare special ability).

QUESTION 7.

Yes: 19 per cent., Los Angeles; 22, Monterey county (in last two years, 2, Monterey county); Ayres, Byrod, Smyth.

Yes, if life-work means duty as a citizen: Kern, San Joaquin, San Luis Obispo, and Santa Cruz counties; Dunn, Trask.

No: Sacramento and Tehama counties; 60 per cent., Los Angeles (in first three grades, 13 per cent., Los Angeles); 55, Monterey county; Burrows, Feibush, Gibson, McAllister, McClymonds, Pierce, Zabel.

No, if life-work means some particular trade or profession : Kern, San Joaquin, and Santa Cruz counties; Dunn, Trask.

Work should be as practical as possible: 8 per cent., Los Angeles.

The environment of the county should determine the course of study : Humboldt county.

Your committee is aware that much careful work has been devoted to this subject during the year, which is not represented in this tabular statement. A valuable report, prepared by the faculty of the State Normal School at San José, reached the committee too late to receive the extended notice which it deserved. Printed copies of this report have been issued. It will repay careful reading. Resolutions were prepared in the county institute of Lake county, but have not yet reached the committee; reports received from Calaveras, Fresno, and Solano counties are omitted from the tables for the reason that their form does not lend itself to tabular presentation ; the first report received, a personal letter from a member of a county board in the northern part of the

ate, was unfortunately lost before the work of tabulation began; a let-
r received from Principal F. L. Burk, of Santa Rosa, referred to else-
here in this report, discusses the general subject rather than the
iestions in detail; and letters received from ten teachers in the
ompkins school, Oakland, relate chiefly to a particular grade each,
id so do not readily admit of tabulation in the statement as sub-
itted above. The committee's circular was reprinted, either as a
iole or in part, in the following counties: Alameda, Humboldt,
ern, Sacramento, San Joaquin, Santa Clara, Tehama. Mimeograph
pies were prepared and sent to all of the teachers in San Rafael.
inted reports were issued after the institute in Humboldt and Santa
uz counties. Doubtless other work of value along similar lines has
en done which has not come to the knowledge of the committee.

II. DISCUSSION OF THE QUESTIONS PROPOSED.

Of the questions proposed by the committee, the most funda-
ental are those numbered 6 and 7. It is evident from the answers
nt in to the committee that these questions have been variously in-
rpreted, and a restatement seems desirable.

It was not the intention of the committee that these questions
iould relate to individual differences among pupils. They were
eant to be of general application, having to do with those broad psy-
iological characteristics in which all children share, and those broad
cial conditions to which all are, in divers ways and varying degrees,
ibject. The question of the weight to be attached to individual dif-
rences may reasonably receive separate consideration.

Your committee would accordingly propose the following revised
orm of questions 6 and 7:

6. How far and in what ways should the work of the several
rades be determined by the prevailing tastes and aptitudes of children
f the age commonly found in each of those grades?

7. How far and in what ways should the work of the several
rades be determined by the need of preparation for the duties of life
i human society?

We would also propose the following additional questions:

8. Are there other general principles which should have influ-
ice in the determination of the course of study?

9. How far and in what ways should provision be made for the
cognition of individual differences among pupils?

In the questions as originally proposed by the committee, these fundamental inquiries were placed at the end of the list. This arrangement was intentional. We believed that in the consideration of the more immediately practical questions, Nos. 1 to 5 inclusive, thoughtful teachers would become impressed with the fact that their conclusions throughout depended upon the point of view; and that they would be the more disposed for that reason to subject their own point of view to serious scrutiny. In this we have not been disappointed. The discussions in several of the teachers' institutes and elsewhere have revealed a growing disposition to inquire into the reasons underlying the opinions expressed.

If we mistake not, current discussions of the school curriculum reflect now chiefly the one, now the other, of the two general views of education referred to in questions 6 and 7 respectively. The one view is chiefly psychological. It would determine the course of study by what it finds within the child. The other is chiefly sociological. It would determine the course by considerations from without. On the one hand, Plato said long ago, "The purpose of education is to give to the body and to the soul all the beauty and all the perfection of which they are capable." On the other hand, we have this from Milton: "I call therefore a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war." In more recent times, we have the familiar definition of Stein: "Education is the harmonious and equable evolution of the human faculties by a method founded upon the nature of the mind for developing all the faculties of the soul, for stirring up and nourishing all the principles of life, while shunning all one-sided culture and taking account of the sentiments on which the strength and worth of men depend;" and still more recently we find Joseph Payne saying, "The science of education is a branch of psychology." On the other hand, Alfred Fouillée has said, "The only object of instruction should be to awaken aptitudes, and never to respond to aptitudes supposed to exist;" and the Committee of Fifteen: "Your committee is of the opinion that psychology of both kinds, physiological and introspective, can hold only a subordinate place in the settlement of questions relating to the correlation of studies. The branches to be studied, and the extent to which they are studied, will be determined mainly by the demands of one's civilization. These will prescribe what is most useful to make the individual acquainted with physical nature and with human nature so as to fit him as an individual to perform his duties in the several institutions—family, civil society, the state, and the Church. But next after this, psychology will furnish important considerations that will largely determine the methods of instruction, the order of taking up the several topics so as to adapt the school work to the growth of the pupil's capacity, and the amount of work so as not to overtax his powers by too much, or arrest the development of strength by too little. A vast number of subordinate details belonging to the pathology of education, such as the hygienic features of school architecture and furniture, programmes, the length of study hours and of class exercises, recreation, and bodily reactions against mental effort, will be finally settled by scientific experiment in the department of physiological psychology."

It appears that we have before us two widely divergent views, the practical consequences of which are direct and important. Is, then, the course of study to be shaped with reference to the all-round, harmonious development of powers which we find in germ in every normal child, and which we find coming into prominence in a more or less regular sequence through the period of growth; and if so, what principle shall determine wherein such "all-roundness" and "harmoniousness" consist? Or is the course to be shaped with reference to preparation for life in the institutions of society—preparation for self-support, intelligent obedience to law, patriotic devotion to the common weal, effective coöperation with one's fellows in the varied relations of life?

Doubtless both considerations must be taken into account; but how are the two to be adjusted to each other? This is a problem calling for thoughtful study, and we commend it to the teachers of the State as a subject for their investigation and discussion during the coming year. The paragraph quoted from the report of the Committee of Fifteen is highly suggestive and stimulating, and will repay extended consideration. We believe, moreover, that these questions will suggest the need of a more minute examination of the psychology of development than has yet been undertaken, as well as a more critical inquiry into the bearing of recent investigations in the domain of social science.

The classification of studies adopted by your committee agrees in the main with that employed by the Committee of Ten. We were influenced in the selection of this particular scheme of classification by the following considerations: Some classification seemed necessary in order to obviate the danger that the discussion would become hopelessly entangled in the multitude of subjects entering into the ordinary school course. A general survey could be obtained only by grouping subjects under a few great heads. The teachers of the State are already somewhat familiar with the grouping employed by the Committee of Ten, and its influence has been felt in the arrangement of recent courses in some of the counties. This grouping is, moreover, a good one, and brings into prominence some of the most essential relationships between the several studies. The most serious objection to the scheme, in the judgment of your committee, is the fact that it does not adequately take into account an important group of subjects having to do with the expressive and constructive aspects of the child's activity. Drawing, music, and various forms of manual constructiveness, are widely recognized as entitled to an honorable place in the curriculum of the lower schools. Many schools, however, have as yet found no regular place for these subjects in their programmes. It seemed best to your committee to begin with the comparatively simple scheme of the Committee of Ten, which embraces the subjects taught in all of the schools; but in postponing to another report the consideration of other highly important branches, we would not be understood as in any degree prejudicing their claim to general recognition.

It will be observed that in one important particular the classification here adopted varies from that found in the report of the Committee of Ten. In that report, studies in Literature are brought under the heading of Language. In the questions proposed by this committee, studies in Literature are grouped with those in History. The reasons for this change may be briefly stated. It emphasizes the close connection between Literature and History in the lower grades. Moreover, it makes a sharper division between what we may call the content studies on the one hand and the more formal studies on the other. It is evident that no absolute distinction can be made between "formal" studies and "content" studies; but in the classification here adopted it will be generally agreed that the groups of Language and Mathematics are predominantly formal in their character, and the groups of History and Natural Science include studies pursued chiefly for the sake of content.

This classification differs also from that of the Committee of Fifteen in two or three particulars, chiefly in that it fails to assign an independent place to Geography. Geography may be regarded as belonging in part to Natural Science and in part to History. The current view of the study places it mainly in the category of Natural Science. We may regard it provisionally as belonging to that group, and postpone more extended discussion of the subject to another report.

The older curriculum, represented by the three R's,—Reading, Writing and Reckoning,—belonged almost wholly to the formal side of the classification we have adopted. The education provided by that curriculum was highly practical, in that it devoted attention chiefly to the mastery of studies that might serve as tools for the later acquisition of knowledge. It had, moreover, a high disciplinary value in that the subjects, being intrinsically of minor interest, made large demands upon the exercise of voluntary or forced attention on the part of the learners. In recent years strong protests have arisen against this earlier curriculum because of its barrenness of ideas and its lack of far-reaching and fruitful interest. A reaction has come about which consists chiefly in the introduction of interesting and instructive material drawn from Literature, History, and Natural Science. The center of gravity of the work of the elementary schools has been shifted, so to speak, from the side of the more formal studies to the side of the content studies. This change has perhaps been more theoretical than practical, yet it has undoubtedly exercised a profound influence upon the practice of the schools. In the consideration of the first five questions proposed by your committee, we are concerned chiefly with the proper proportionate adjustment of the work in these four groups of subjects; and more especially with the consideration of the relative place of the formal and the informational groups.

It is to be observed that the complaint of the over-loading of the curriculum, which has become general in recent years, is largely due to this movement toward the introduction into the course of much useful and interesting knowledge. An important practical difference between the two sides of the course has come to light. It has been seen that the choice of topics is a much more difficult matter on the side of content than on the formal side. In the pursuit of the formal studies, certain kinds of skill are to be acquired, certain processes to be mastered, a certain training of the powers of thought is to be secured. These things are relatively definite, and the serious questions which arise relate chiefly to minor details. Children must learn to read, to write, to spell, to pronounce correctly and distinctly, to express themselves with grammatical propriety, to understand the relations of the different parts of the sentence one to another; they must learn to add, subtract, multiply, and divide, to use common and decimal fractions, and to understand the reasons for some of the more advanced processes of arithmetic. When we come, on the other hand, to the arrangement of studies in Literature and in Natural Science, a wide range of possibilities is open. There is so much which children should know, the knowledge of which is distinctly advantageous, that it seems impossible to frame a satisfactory course without making it almost encyclopedic in its character. Experience and reason show that the course cannot be made encyclopedic. The ideal of All Knowledge, so fondly cherished by Comenius, cannot be attained in the elementary schools. The true wisdom of the framers of courses of study on this side must lie in the wise choice of materials; and the determination of the principles which should govern such choice is one of the most important problems involved in the shaping of a course of study. Certain principles of choice will be suggested in a later portion of this report.

Attention may be called to another marked difference between the two sides of the course of study. While it is possible on the more formal side to secure relative perfection of attainment on the part of the pupils, and the degree of excellence attained may be readily tested; the chief value of the studies of the other groups is found in the fact that they exercise a far-reaching and often impalpable influence upon the thought and sentiments of the learners. The formal studies can be pursued under pressure, and in them facility, quickness, and perfect accuracy can be sought; in studies in nature and literature and history on the contrary, the loving and eager pursuit of the subject on the part of the children is to be chiefly desired. Strict accuracy has its place here, too, without doubt; but it is not the chief desideratum. Particularly in the primary grades, the main care of the teacher in respect to these branches must be to bring the children into sympathetic association with the things studied. Time must be allowed for the growth of living appreciation. Here "the husbandman waiteth for the precious fruit of the earth, and hath long patience for it, until he receive the early and latter rain."

We have been concerned thus far with the general characteristics of the two great divisions of the course of study, with reference to both primary and grammar grades of the elementary school. We may pass now to a more particular examination of the several groups of studies, with especial reference to the primary grades. The primary schools of California contain sometimes four, and sometimes five or more grades, including the "receiving class." The statistics in the hands of the State Superintendent of Public Instruction seem to indicate that one-half of the pupils who enter our public schools drop out before the grammar grades are reached. The public good demands that this fact be taken into account in shaping the course of study. The work must be arranged with reference to securing a fair degree of completeness before the point is reached at which a majority of the pupils are no longer under instruction. Doubtless a course can be so constructed that the needs of this majority can be met without serious disadvantage to the more promising minority. Besides, under a good course of study in the hands of good teachers, the average age at which pupils leave school can be steadily raised from year to year. But the question as to what will be most advantageous to those who take only the abbreviated course must be fairly met.

Attempting to sum up the chief services which the primary school should render to its pupils, we may present the case somewhat as follows: 1. In the first place and chiefly, the children should be taught and trained in the exercise of certain moral virtues. They should learn to be obedient, orderly, self-respecting, cleanly, and industrious. What is perhaps of still more importance, they should be led as far as may be to take a lively interest in some of the better things of life. To give them a love for school, and still more a love for knowledge, and to quicken their individual aspirations after better things, should be among the chief endeavors of the teachers in the earlier grades. 2. They should be given command of the tools on which future progress depends. In other words, they should be taught to read, to write, and to reckon. These tools are not only necessary if they would make any progress by themselves after leaving school, or indeed if they would discharge the mere routine duties of citizenship; but are also necessary to any effective prosecution of higher studies in the school. 3. They should be introduced to the fields of useful and interesting knowledge, and be given such a start in the pursuit of knowledge that they may be expected to make some progress therein after leaving school.*

The second of these requisites finds reasonably definite provision in the course of study. It is met by the earlier work in Language

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* As regards the earlier grades of the school we are in substantial accord with the utterance of the French Commission on Primary Education regarding the *écoles maternelles:* "The Commission thought that the maternal school would have fulfilled its office, if the children who came from it were in good health, if their minds were open rather than full, if their young conscience were awakened, if they had contracted good habits, if, in addition, they knew a little reading, writing, and counting, and especially if they had learned to love school."—Revue Pédagogique, Vol. XII., p. 613.

(reading and writing) and by the more mechanical processes in number. Nature studies and easy studies in literature are among the materials of instruction best calculated to meet the first of the requisites mentioned. The same materials are available for the third purpose; but the knowledge of these subjects which can be imparted to little children constitutes a much less important result of their schooling than do the habits, sentiments, and aspirations which may be associated with even small acquisitions of such knowledge.

We may accordingly regard the course of study of the primary school as made up on the one hand of definite material of instruction in language and number; and on the other hand of a wide range of possible material of instruction in nature study and literature. We may say that attainments in language and number—or at least in language—are necessary to the prosecution of higher work; and the pupil's progress here can be definitely ascertained. Nature study and literature probably affect the character of the child more vitally, but progress in these studies is too subtle to be accurately measured; we can only guess at the pupil's real gains through signs of awakened intelligence, interest, and love for the things he has studied. The studies then that are necessary for promotion from grade to grade in these earliest years are language and (possibly) number; while nature study and literature are among the teacher's choicest means of achieving the finer and more impalpable results of school work. It seems fair that primary school teachers should meet a substantial requirement of instruction in language; and that they should have secured to them some reasonable portion of the school day in which to give that other instruction which prepares for no sort of mechanical test, and which is chiefly valuable for the spirit which it evokes.

Provision should be made for both sides. It is likely that in the first year more than half of the time will of necessity be devoted to the language side—to learning to read and write; and throughout the primary grades the language studies will require a proportionately large time allotment. The lack of knowledge can more easily be supplied after the pupil has left school than can the lack of the tools of acquiring knowledge. The primary schools must not fail to secure to their pupils as thorough a training in the English language as time and the ability of little children will permit. A skillful teacher can give the finest essence of elementary instruction in nature study and literature without taking from the time actually needed for language studies. Time is easily wasted on either the one side or the other.

But here a striking characteristic of the work of the elementary ool, and particularly of the primary school, should be mentioned. e several branches of study are not sharply separated one from the er as in the secondary school. Its sciences are not true sciences, d no attempt should be made to make them such. It is a common ctice of many progressive teachers to render the necessary work in ding, language lessons, arithmetic, and other formal studies more ractive by associating the instruction in these branches with intering material in literature, history, or nature study. Some combition exercises of this sort are intended to answer to a definite idea the real correlation of subjects. Others are characterized with less arness of purpose and often lead to confusion of ideas. Though the jects of instruction in the lower grades are not sharply differented as in the higher ranges, some lines of differentiation are import, and cannot be obscured without detrimental results. We purse considering in a later report the general subject of the correlation studies. All serious and intelligent efforts toward a true correlation serve every possible encouragement. We can give no better word caution against the pitfalls of superficial combination of subjects an to call attention to the repeated utterances of Alexander Bain on this topic (in "Education as a Science;" especially chapter IX., "The Mother Tongue").*

The tools of learning become significant only as they are applied real material of knowledge. The forms of language, number, etc., ust be applied in use to some content or other, and it is important at there should be selected for this purpose a content having the reatest possible value in itself. The caution which we suggest is rected against the danger of confusing form and content in instruction, and the closely related danger of distracting the attention of pils by pursuing diverse ends within the same short recitation riod.

We may refer briefly to the problem of the relative place of the o great branches of formal instruction, Language and Mathematics, rticularly in the primary school. Lest there should be a possible isunderstanding in the use of terms, we may repeat here that in the anguage group is included, for the present purpose, the work in learning to read, write, and spell, as well as the instruction that goes commonly by the name of language lessons; and that the term mathematics, including at the present time in the usage of most primary schools merely number work, should cover also any elementary exercises that may be given in the schools preparatory to the study of geometry.

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* In chapter X. of the same work occurs this significant passage: "I have everywhere intained as a first principle of the economy or conduct of the understanding that separate jects should be made separate lessons. This is not easy when two studies are embodied in same composition, as language and meaning; in that case the separation can be effected by ping one of the two in the background throughout each lesson."

So far as the lowest grades are concerned, there can be no doubt that the various lines of work in language must take precedence over the elementary work in mathematics. It is a significant fact that each great, new expansion in the child's intellectual horizon is associated with and largely brought about by a marked increase in his command of language. We can scarcely realize the immense advance which the baby makes in learning to talk. In like manner, his entrance upon school work marks another great stage of progress, in the acquisition of the power to read and write. We may hesitate to say with the Committee of Fifteen that "The whole elementary course may be described as an extension of the process of learning the art of reading;" yet the successful prosecution of the later work in all branches of study depends in large measure upon the early instruction in language. Observant teachers have often been heard to declare that the chief difficulties they met with in the teaching of arithmetic and other branches resolved themselves into difficulties in the use of language. In no other group of subjects, certainly, does the failure to do thorough work in the lower grades of the school affect more disastrously all later instruction.

We cannot agree, however, with those who would banish all work in number from the lower grades. We believe that most children take a natural interest in numbers, and there appears no good reason why they should not acquire a considerable degree of facility in handling the simpler combinations of numbers in the primary school. In the first grade, number work should not be allowed to interfere with the effective prosecution of the work of learning to read. It will probably be a gain in the long run to do none but incidental work in number in this grade. And in the primary grades above the first it seems desirable that such instruction as is given in number should relate chiefly to the mastery of mechanical processes.

As bearing upon the question of the relation of the formal side of school work to the knowledge subjects, especially in the lower grades, we may quote a suggestive passage from a letter of Principal F. L. Burk, of the Santa Rosa schools: "If by language is meant the power of the child to classify and name facts of consciousness which are clearly in his mind, then I would be inclined to say in answer to Question 4, that in the lowest primary grades he will be kept very busy naming and classifying the facts which he has gathered prior to his entrance into school life—the facts of concrete quantity, of scientific relation and of emotion; and I should be inclined to protest seriously against work which should have for its chief end the addition of raw objective facts—indeed, at any point of school education it is to be questioned whether addition to the store of raw facts should take precedence over the business of arrangement. If we school men will look after thorough digestion, the mind will win the food."

Your committee is not prepared to enter into any formal discussion of the relative place of the two great lines of study on what we have called the content side of the course. As regards nature study, an interesting line of inquiry is opened up by the paper of Mr. E. P. Rowell, published in the *Pacific Educational Journal* for April, 1895. No other line of work attempted in the elementary schools is in so chaotic a condition at the present time as is our nature study. Probably one reason for this state of things is that suggested by Mr. Rowell, that courses have been mapped out in this department without taking into account the actual state of the children's natural interest. Another reason, which may be at bottom the same, is that in this study no valid sequence of topics seems to have been discovered. These aspects of the question call for careful and extended investigation. On the side of History, and particularly of those simple forms of narrative which serve as the introduction to History so far as little children are concerned, interesting inquiries into the choice of material have been undertaken in the State Normal Schools at San José and Los Angeles.

Your committee offers this incomplete and wholly inadequate discussion of the general subjects entering into the primary school course, in the hope that it may at least stimulate the teachers of the State to further study of this great problem. In apology for the fact that this report undertakes to give very few definite answers to the questions proposed, we may say that your committee takes the same attitude which it has urged the teachers of the State to assume—an attitude not of advocacy of opinions, but rather of the candid search for truth. Of the questions raised, the one offering the greatest practical difficulties is that relating to the time allotment. There is undoubtedly danger of attempting to make schemes of time allotment too minute. Yet the inquiry which this question has aroused seems to your committee likely to prove highly beneficial, in that it leads to a close examination of the present practice and of the reasons underlying it. The quantitative aspect of the first five of the committee's questions centers in this question of time. We believe that this may profitably be continued as one of the questions for consideration during the coming year.

The qualitative problem of the determination of the principles which should govern the choice of materials on the content side, is one demanding long and patient study. We venture to indicate certain principles, a consideration of which may prove suggestive to those interested in undertaking the investigation of this problem:

It would seem that since it is impossible to secure encyclopedic knowledge, such topics should be selected for the purposes of instruction as will present convenient centers for the organization of knowledge that may be acquired later. Other things being equal, material should be chosen which will be significant for the higher studies in the same subjects; but this does not imply that the elementary work should present an outline of the sciences, literature, and history to be studied later. It should rather begin with what is nearest to the child, whether locally or in respect to his natural tastes and aptitudes. It should be material of such character as may be most likely to insure a lively participation on the part of the child and to lead him to desire a long-continued and loving association with the things studied. It should be material with which the teacher has already enjoyed such long-continued and loving association. Thomas Arnold once said, "That which we know and love, we cannot but communicate; that which we know and do not love, we soon, I think, cease to know." Especially in the lower grades, latitude should be allowed to teachers to select topics which they can teach best. Especial pains should, moreover, be taken to select material which has a vital and stimulating ethical significance.

Whatever choice is made, it is incumbent upon those who choose that they have abundant reason for selecting the few things that are taken in preference to any of the multitude of things which must be passed over.

III. RECOMMENDATIONS.

Your committee would respectfully present the following recommendations:

A. That a sufficient number of copies of this report be printed to supply all of the teachers of this State, and to provide for such distribution to representatives of the press and others as may seem needful to the committee in the further prosecution of its work.

B. That the State Teachers' Association be asked to appropriate the sum of one hundred and fifty dollars to be expended by the Council in the publication and free distribution of this report, in the printing of such circulars as may be required for the furtherance of this discussion and investigation, and in the payment of necessary postage.

C. That all county and city superintendents of schools in this State be requested to transmit copies of this report to all teachers in the public schools of their respective counties and cities, and to set apart each one day of the county or city teachers' institute of the year 1896 for the discussion of the questions proposed by your committee.

D. That all teachers be requested to give serious thought and study to the problems presented in these questions and to participate in the discussion of the same in the teachers' institutes; and that the institutes be invited to sum up and transmit to this committee the results of their discussions, whether embodied in the form of definite resolutions or in any other convenient form.

E. That the public press of this State be invited to participate in the discussion of these questions.

F. That this committee be authorized to appoint such advisory committees and sub-committees as it may deem desirable for the better prosecution of its investigation; and that for this purpose it be not limited to the membership of either the Council or the Association.

G. That one half-day session of the next meeting of the State Teachers' Association be devoted to the presentation of reports of the further progress of this investigation and the discussion of the same.

H. Your committee would recommend that the discussions of the coming year be directed to the following questions:

3. What proportion of the time in each grade should be devoted to each of the four groups of studies: (1) *Language* (including reading, writing, language lessons, and grammar), (2) *Mathematics* (including number work, arithmetic, geometry, algebra, etc.), (3) *History* (including literature and history proper), and (4) *Natural Science* (including observation lessons, nature study, and geography)?

6. How far and in what ways should the work of the several grades be determined by the prevailing tastes and aptitudes of children commonly found in those grades?

7. How far and in what ways should the work of the several

grades be determined by the need of preparation for life in human society?

8. Are there other general principles which should have influence in the determination of the course of study?

9. How far and in what ways should provision be made for the recognition of individual differences among pupils?

10, *a*. What studies from the mathematical group should be pursued in each of the grades?

10, *b*. In what grade should long division be taught?

10, *c*. In what grade should the study of common fractions begin? In what grade should provision be made for teaching the addition of common fractions by finding the least common multiple of their denominators?

10, *d*. In what grade should the study of decimal fractions begin?

10, *e*. In what grade should the analysis of problems begin?

10, *f*. In what grade should the learning of tables of denominate numbers begin? What tables should the pupils be required to learn?

10, *g*. What topics in percentage should be taught in the schools?

10, *h*. Is it desirable that the work of each grade should deal with one topic or small group of topics in arithmetic; or should work in all of the main topics be continued through several grades?

10, *i*. What place should be given to mental arithmetic?

10, *j*. What topics in algebra should be covered in the course for the grammar school?

10, *k*. What should be the general scope and character of instruction in geometry in the elementary school?

10, *l*. What instruction in book-keeping should be undertaken in the elementary school?

We would call attention also to certain other questions of great importance, which are not proposed for regular discussion this year, but which it is our intention to bring up for extended consideration at some future time:

What kind and what amount of manual training is desirable and practicable in the elementary schools? Should a difference be made between the schools of cities, those of small towns, and those of country districts in this particular?

[We would call especial attention to the valuable reports on this subject to be printed and distributed this year by the State Teachers' Association.]

What principles should guide in the choice of literary material for use in the several grades?

What principles should guide in the choice of topics in nature study in the several grades?

What degree of excellence in language work may reasonably be expected of pupils in the several grades? What allowance must be made for the lack of home training in language and for differences in nationality? In what way should the study of formal grammar be introduced?

What correlation or "concentration" of studies is possible and desirable in the several grades?

So many teachers have asked for guidance in reading upon the general subject of the course of study that we repeat the list of books suggested in our first circular, and make some additions to the same:

The two works that are especially recommended are The Report of the Committee of Ten on Secondary School Studies, and The Report of the Committee of Fifteen. (These are published by the American Book Company and by other publishers of educational works.)

The following additional works were mentioned in our first circular:

White, Emerson E.: The Elements of Pedagogy. (Chicago, American Book Company.)

McMurry, Charles A.: The Elements of General Method. By the same author, Special Method for History; Special Method in Reading; Special Method in Geography. (Bloomington, Ill., Public School Publishing Company.)

Hill, Thomas: The True Order of Studies. (New York, G. P. Putnam's Sons.)

Parker, Francis W.: Talks on Pedagogics. (Chicago, E. L. Kellogg & Co.)

We may add the following titles of works which will be found helpful either upon the subject as a whole or upon particular points:

Bain, Alexander: Education as a Science. (New York, D. Appleton & Company.)

Compayré, Gabriel: Lectures on Pedagogy. (Chicago, D. C. Heath & Company.)

Lange, Karl: Apperception, a Monograph on Psychology and Pedagogy. (Chicago, D. C. Heath & Company.)

McLellan, James A., and *Dewey*, John: The Psychology of

Number. (New York, D. Appleton & Company.) [An interesting "symposium" on this book appeared in the *Journal of Education* (Boston) for December 5th, 1895.]

McMurry, Charles A.: A Course of Study for the Eight Grades of the Common School. (Bloomington, Ill., Public School Publishing Company.)

Prince, John T.: Courses and Methods. (Boston, Lee & Shepard.)

Prince, John T.: Methods of Instruction and Organization of the Schools of Germany. (Boston, Lee & Shepard.)

We would call attention also to papers and discussions relating to the question of Mathematics in the schools, contained in the published Proceedings of the California Teachers' Association for former years, and particularly to the report of the Committee on Mathematics presented at the meeting held in Santa Cruz (1894).

Valuable papers relating to the problem of the curriculum may be found also in the *First Year Book of the Herbart Society* (to be had of Charles A. McMurry, Secretary, Normal, Illinois).

Those who have access to the Annual Report of the Board of Education of Massachusetts for 1893–94 will be interested in the new course of studies for elementary schools given in pages 305–429 of that document.

In conclusion, we would express our high appreciation of the co-operation we have received in the labor of the past year. So many have rendered valuable assistance that it would be difficult to make individual mention of those to whom we are most indebted.

All of which is respectfully submitted.

JOHN W. LINSCOTT,
ELMER E. BROWN,
JAS. A. FOSHAY,
LUCY M. WASHBURN,
P. M. FISHER,
Committee.

Adopted by the Council of Education.

S. T. BLACK, *President.*
J. W. MCCLYMONDS, *Secretary.*

The following resolutions were adopted by the California Teachers' Association, January 4, 1895:

"*Resolved*, That we recognize with great satisfaction the very general participation on the part of our teachers in the investigation of he problem of our elementary curriculum, as inaugurated by the State Council of Education. We believe that the effective prosecution of this inquiry during the coming year in every county and city f the State is greatly to be desired.

"*Resolved*, That the Council be and hereby is authorized to print nd distribute gratuitously to the teachers of the State, the reports of ts committees on the course of study, on high school certificates, and n manual training, and that the Council be authorized to draw upon he treasury for $200, or such portion of that amount as may be reuired for necessary printing and postage."

EARL BARNES, *President.*
ANNA C. MURPHY, *Secretary.*

REPORT OF THE COMMITTEE ON HIGH SCHOOL CERTIFICATES.

PROF. SANFORD.

The committee on the certificating of high-school teachers has been instructed by the Council of Education to make the following report:

Your committee, while recognizing that the present system of examination of high-school teachers by County Boards of Education has led to an unusually high standard of scholarship on the part of the high-school teachers of California, still believes that a more nearly uniform system of issuing certificates throughout the State would greatly increase the efficiency of many of our high schools. To secure such uniformity, it seems necessary that the qualification of applicants should be determined by some examining board appointed for the whole State.

That the present State Board of Education, made up, as it is, principally of men engaged in university and normal school work, is not an ideal board for deciding upon the fitness of high-school teachers, goes without saying. The men who, above all others, best understand the needs of the high schools are the high-school principals of the State, and no board in which the high-school principals do not have the controlling vote should decide upon the fitness of high-school teachers.

Again, an examining board for high-school teachers should be as far removed as possible from any possibility of political manipulation, and should be made up of men and women willing to serve the State without pecuniary remuneration.

To accomplish these purposes, it has seemed desirable to the members of the Council that such board should consist of the State Superintendent of Public Instruction, the Professor of Education in the State University, and three high-school principals, to be selected by these each year, and that said board should receive no recompense from the State beyond the necessary expenses of travel and of conducting such examinations as may seem desirable.

It is further recommended by the Council that in the future only those teachers who have had a liberal training equivalent to that given by the best colleges and universities of the country shall be eligible to the position of high-school teachers in California. It is not insisted, however, that the whole of such preparation shall have been acquired in college, providing the applicant shall be able to show by examination that he has reached the proficiency in any general line of study required for the baccalaureate degree in our best colleges.

It is known to the committee that an unusually large proportion of the high-school teachers of California are already graduates of reputable colleges, and that, with the increased facilities for professional training offered in the educational departments of the universities of this and other States, the supply of university-trained teachers will exceed the demand which the above mentioned requirement would produce.

In addition to the diploma from an approved college, which the high-school board may, or may not, be willing to accept as an evidence of suitable scholarship in the ordinary branches of the high-school curriculum, it is believed by the committee that examinations should be conducted with the purpose of determining the fitness of the applicant for teaching some special department of high-school work. It is believed that the best high-school instructions can be given only by teachers, who, in addition to a general training, are especially qualified in some particular department of knowledge. It would accordingly seem desirable that such examinations as are given should be based principally upon the specialty which the applicant expects to teach, and that the certificate should indicate the subjects in which the teacher is approved by the examining board.

It is recommended by the Council that two classes of high-school certificates be granted, the one good for four years, and the other for life; that the life diploma be granted only after three years of successful experience in high-school teaching, and that the board have power to revoke either certificate for incompetence or unprofessional conduct.

It is believed by the Council that the above mentioned requirements should be uniform throughout the State, but that principals or school boards should have the privilege of making any additional requirements which the needs of their particular schools may seem to demand.

The question as to whether a high-school teacher shall be required to have pursued a course of so-called professional study in the educational department of some college or normal school was not passed upon by the Council. In the opinion of the committee, such a course is highly desirable, and should, if not absolutely required, be strongly recommended.

FERNANDO SANFORD,
FRANK MORTON,
ELMER E. BROWN,
Committee.

ON THE CORRELATION OF ELEMENTARY STUDIES.

PROFESSOR G. H. HOWISON,
University of California.

WHAT I am about to say to you, fellow teachers, may well enough be taken as a sort of introduction to the inquiries which the committee from our State Council of Education has invited you to undertake during the year now opening, I mean the inquiries (1) into the course of study that is best for elementary schools, and (2) into the arrangement of the chosen studies that is most suitable in view of the educational aims. You listened to our committee's report with patient, nay, with interested attention, and you doubtless noted, at its close a few moments ago, the course of reading recommended as auxiliary to your study of the various questions proposed. You therefore cannot have failed to take especial notice of the prominence given in that course of reading to the two Reports, now heard of everywhere, sent out to the educational world by our National Educational Association. I refer, of course, to the "Report of the Committee of Ten" and the "Report of the Committee of Fifteen."

These two Reports are named by the committee from our State Council as the primary and chief texts by which your studies on the elementary curriculum and its arrangement are to be guided. It is only the "Report of the Committee of Fifteen," to be sure, that treats directly of your question; and the Council has accordingly asked me to say to you a few words about that, particularly with reference to the very lively discussion which its exposition of principles has provoked. Still, as our State Council committee has conjoined with this Report of the Fifteen the Report of the Ten, doubtless because some principles in the latter, though laid down for secondary schools, are felt to be of great importance for elementary schools as well, it will be natural and proper for me, in what I say, to bring out something of the relations subsisting between the two Reports, noticing particularly certain marked differences between them. By way of preliminary, it is worth saying that the "Report of the Committee of Fifteen" really contains three distinct reports on three very distinct subjects connected, with elementary schools, the committee having been divided for this purpose into three sections of five members each; so that it is only with the second of these sections that we are really concerned this morning—the section whose report deals with the Correlation of Elementary Studies. We are consequently to consider, not the views of fifteen, but only of five committeemen. For the sake of a brief and convenient style of citation, then, I shall refer to these two great Reports, during the rest of my remarks, as the *Report of the Ten* and the *Report of the Five.*

Strongly as these two Reports resemble each other in their exceptional ability, there is nothing more striking about them than the different, yes, the contrasted fates with which they have thus far met. The Report of the Ten has been hailed with an acclaim so nearly universal that the few dissenting voices are practically drowned in the wave of approval; but the Report of the Five seems in some danger of having its voice overwhelmed in the clamor of dissent which it has roused. The reasons for this great contrast of fates attending two performances so akin in pre-eminent merit, are not merely a matter for our curious interest, but are an imperative object of our inquiry, if we would be true to the heart of great educational discussions. Accordingly, though it will be impossible to do any full justice to the subject in the few minutes at our disposal, I will endeavor to show, in a brief and imperfect way, what the main causes are that have brought this great difference about.

Notable of both the Reports is the fact that each is dominated by the influence of one mind—that of the chairman of the committee in charge of it; and this to a degree quite unusual in such cases. So that, in effect, we have in these two Reports the expression of the minds of two men of profoundly differing types; the two, in fact, who by a silent general consent have now for years been acknowledged as in their respective kinds unquestionably the leaders of our American education. In the Report of the Ten we have the mind of the President of Harvard University; and not only upon the matter of an orderly and sound curriculum for secondary schools, but implicitly upon the far profounder matter of the determining principle for the whole scheme of a people's education. In the Report of the Five, we have the mind of the United States Commissioner of Education; and he, too, in setting forth the principles determining the right correlation of studies for elementary schools, finds his occasion, and indeed the necessity, to give us explicitly his full mind upon the principles that should determine all selection and all correlation of *all* studies, if education is to be sound; and he takes such a course in this great matter as to make his mind upon it appear as if it were the mind of mankind itself thereon. For his chief argument is, that the safety of the human kind as an historical whole is what is in issue in the question of correlating studies, and that the all-controlling principle in a right correlation is the due selection and apportioning of studies in the light of their bearing on the historic integrity of the human race, and on the integrity of each child as a member in a whole that is to be historically continuous, and genuinely because historically progressive. What really makes these two Reports so interesting and so significant is the conflict latent in them between these two marked personalities. We can read in this the deeper conflict of two great *types* of personality—two types of human aim and purpose; two contending views, in fact, upon the meaning, the explanation, and the direction of life; in short, the conflict of two philosophies.

The gist of the difference between these two philosophies, and consequently between the two Reports, is the different value which they place (1) upon the native tendencies of each particular human being that lead him away from a fixed common type of mankind, and (2) upon that universal or rational type. The one proceeds upon the view that each peculiar and individual expression of the common human nature is the one fact of truly cardinal value; the other, upon the view that the supreme consideration must be the type characteristically *human*—not private and peculiar, but public, generic, and, above all, historic. The one fills its eye with the single human being and his peculiar whole of personal endowment, in no other exactly repeated, and incapable of being replaced by anything but itself; the other, with the imposing whole of the universal rational nature, in comparison with which individual variations seem trivial, and which appears clothed with the authority and majesty of history, and with the incomparable warrant of a public judgment that has borne the test of time, of experience, of the long conflict of considerate reflection and experience-sobered forethought with the complex and adverse circumstances amid which the race has had to mature. The one, therefore, finds the chief motives of educational aims and methods in the interests of the single pupil; the other, in the rational authority of the human type, historically developed and tested and warranted. The watchword of the one will be that word now heard so constantly from almost every quarter, the word so naturally dear to every modern heart, the word so attractive, so fascinating,—the kindling word *Interest;* the watchword of the other, that word which, if often forgotten amid the whirl of contending and confusing interests, is still the word that wakes the deepest chords in the human soul whenever it is heard,—the commanding word *Duty*, the bracing word *Character*, the invigorating phrase *A Reasonable Life*. Everywhere the one philosophy, and accordingly the one Report, echoes to thetheme of election in education,—the greatest possible range of free choice by the individual student as to what he will study, guided by what he finds answering to his native interest in subjects; everywhere the other, to the theme of a rational system of subjects for study, which is held to express the universal reason of mankind in its several essential aspects, and which must enter into every scheme of education that can claim to be truly human, in the sense of being genuinely reasonable. Thus the one philosophy, with its accordant report, finds the master principle of education in personal native impulse, in personal Desire; the other finds it in a public or generic intelligent judgment, that gets at the abiding heart of human nature with all the mass and momentum of history,—in a universal Rational Will, which is to judge, to master, and to use, all individual desires. Consequently, the Report of the Ten appeals directly to the foremost tendencies of the times, the present mood of the *Zeitgeist*, and naturally finds a corresponding response. But the Report of the Five has to stem the prevailing current; indeed, has to turn it from its course; and it not only invites the prevalent thought to an unrelished self-criticism but it demands as the effective means of this a much subtler and deeper order of thinking than the habitual flow of consciousness finds easy. This accounts largely, as it seems to me, for the present greater success of the Report of the Committee of Ten; but it also foretells, as I believe, the profounder coming acceptance of the Report of the Five—an acceptance that may be slow in maturing, and that will no doubt be attended with corrective criticism of details, but that will be all the more settled and secure.

Another reason for the difference in fate of the two Reports is undoubtedly to be found in the different methods by which they are respectively supplied with evidence to convince and to influence those to whom they are addressed. This difference of methods is, in part, ingrained in the very difference of view and aim which we have just considered; but it is, in perhaps greater part, also owing to the characteristic powers of their two authors. Without the least disparagement of either, I think we may truly say that if the author of the first has a genius for administration, the author of the other has a genius for thought, for penetrating to first principles and to fundamental reasons. Thus the Report of the Ten, instead of arguing, proceeds, with the genuine administrative instinct, directly to the established sources of administrative authority, and, selecting approved representatives of the staff actually engaged in managing and teaching secondary schools, obtains their opinions, justly reckoned weighty, on the several questions raised. These are colligated, judiciously sifted, adjusted, most skillfully harmonized; and the condensed result—briefly, pertinently and forcibly set forth, carries with it naturally all the convincing weight that judgment already accepted and taken for granted must always have, and must have in the highest degree when there is confidence in the process by which its adequate representatives have been selected, and confidence in the administrative capacity of the man who selects them. Far different from this simple appeal to what the public directly concerned has already definitely settled, and this masterful avoidance of inquiries that may unsettle everything, and must unavoidably unsettle much, and stir up the more or less violent dispute that inevitably attends all starting of real questions—far different from this is the problem of the man who will inquire into the final reasons of things; who cannot find it in him to admit that what either individuals or communities, either personal instincts or gradually acquired customs and habits of feeling, merely want to have or to do is what in reason they ought to have and to do, but is drawn onward by a high conviction that there is a discoverable *reason*, an ideal justification, for everything that it is worth man's while to do or to have. The Report of the Five inquires into the chief problem of education in this spirit of deep and truly sober speculation. It opens matters to the bottom, and stirs them up from their depths. Its direct appeal to the ultimate reason in the case, its appeal from mere fact and actual practice to ideal considerations, may be in the best sense stimulating, but it carries with it the unavoidable consequence that the judgments of its readers, once invited and aroused, will surely be diverse, will be strongly so at first, and will require a process more or less tedious, a lapse of time possibly long, in order to come to a settled harmony.

Accordingly, the author of this Report has found himself—very likely without surprise—confronted with a keen opposition to his main positions, and that too from the very class of minds among our school managers who may well claim to rank among the most intelligently alert. There are three main lines of objection which they follow in criticising the Report.

The first of these is, that its author's view on correlation of studies misses the real aim entirely: his scheme, they say, is not correlation in the true sense of the word at all. His system should be called, rather, a system for the selection and valuation of studies; a system of their coördination instead of their correlation. Correlation, they will have it, means the bringing of the subjects of study into a closer unity than that of coördination; it means that they shall be brought into a unity of subordination, and that some subject, or rather some principle of dealing with all subjects, needs to be found that will serve to reduce each to its proper place and function as an auxiliary of greater or less subordination in the process of real education. It must settle which of them is really principal and substantive, and which merely subsidiary and instrumental. The Report, they claim, has only begun the work assigned to its committee; or worse, it has built up a barrier in the way of the work, by suddenly arresting the investigation when it has settled upon the several studies that legitimately belong in an elementary curriculum, and then obstinately insisting that this shall be taken as the only problem, and its result as the only true meaning of correlation.

This brings them to their second line of objection. What they really mean is, that correlation, taken in the sense of a unification by subordination, has its secret in the recognition that mind, the development and right discipline of which is the business of education, carries in its very being as self-conscious intelligence a distinction between consciousness as substantive contents and consciousness as mere form—mere way of putting or stating those contents. All the interest of mental being lies in the contents, they say, and none of it at all, or next to none of it, in the mere form. Thus this distinction between knowledge of contents and knowledge of mere form is the distinction, they claim, between the knowledge that alone is substantive and real, and the knowledge that is merely nominal. The form apart from the contents is unreal, hollow, meaningless, insignificant. There is in it no interest, except for a few unusual minds, who, whatever their remote usefulness as makers and polishers of instruments for real intelligences, are themselves hardly human, are a sort of gnomes that live in the underground *Dammerung*, and are themselves repellent Dryasdusts. The application of this vital distinction between form and contents to the question of correlation, say these critics of Dr. Harris, would settle a main practical question in elementary education at once. It would explain why the children in elementary schools do not flourish as they ought; it would show that they are perishing from an unsucculent diet of the Three R's—from a lack of the proper nourishment to be found only in interesting contents, and a vain attempt to feed minds on the empty husks of the merely formal consciousness. For, cry these Herbartian philosophers, what is Reading, 'Riting, or 'Rithmetic, but just the *form* of thought and reality, pure and simple,—form torn off from its proper contents, and in itself destitute of any human interest or meaning? Nature and man,—natural science, history, poetry—these alone furnish the mind with contents. What wonder that the school children do not care, except rarely, for learning to read and write and cipher, when it is plain that not one of these things gives them any interesting contents, any savory pabulum, at all, but instead only forces on them the juiceless cud of empty form? These things, no doubt, have to enter into the work of elementary education, but they should only play a minor and a servant's part there, just as the mechanic's tools are indispensable to his work, but are after all nothing but *tools*, and would lodge him on the summit of absurdity if he spent his time at making them and keeping them in order. The demand paramount, say these critics, is to *correlate* these formal studies into their proper place of humble service and instrumentality, and to teach them by means of interesting contents to which they are applied. All the Three R's should be taught *incidentally* merely,—as need for them actually comes up in the course of learning by the help of the senses the interesting things of science, history, and poetry.

At this point, the third line of objection from these critics comes into plain view,—the real and basal line. They claim that Dr. Harris makes no proper provision for *interest*—that he ignores or belittles the absolute mainspring of fruitful education; which is that whatever a pupil studies shall interest him. Dr. Harris, his critics maintain, would bring all pupils, every one of whom is an unreplaceable original,—with desires, powers and interests all his own, having in themselves mandatory rights, the satisfaction and preservation of which ought to be the devout study and persistent business of every teacher—Dr. Harris would bring them all under the Procrustean forms of a public and undiscriminating tradition; a tradition, too, that commits the fatal oversight of rating formal and implemental studies even higher than studies of contents and substance, and that ignores the plain truth, no longer to be blinked, that human beings are not all cast in the same mould, but are made in every variety of nature, with interests endlessly varying; a tradition, finally, that knows nothing of the central fact that the entire life of humanity turns upon INTEREST, which is at once its spring, its inspiration, and its hope.

But in this doctrine of Interest—this absolute justification of the human natural self as a product of birth and heredity—Dr. Harris hears the knell of civilization. The secret of *that*, surely, whatever it may be, is of somewhat higher import than the satisfaction of merely individual instincts, qualifications, and desires. And, just as surely, it cannot lie directly in those private desires, cannot be made out of endless variation, isolation, difference. Nor can the great thing we mean by CHARACTER, which assuredly is the true goal of all education, be built out of mere instincts and desires and the perpetual consultation of these, and the persistent cultivation of them. What must become of Rational Freedom, of all that goes to make real manhood and real womanhood, if the culture of each person is to be studied and guided wholly from the point of view of the natural interests, the private personal desires of each?

Well, there is the issue between Dr. Harris and his critics—the issue between Interest and Character: on which side of it are you? I shall undertake no decision of it now, though I admit that my sympathies are mainly with the view of our distinguished Commissioner of Education. Next year I shall hope to bear some part in the discussion of this question that is to come at our meeting in San Jose, and then I shall be glad to go into the core of the subject on its merits. For the present, I must content myself with having thus briefly told you what I suppose the real question is, and with the further statement that, in my opinion, there can never be any satisfactory solution of the many problems connected with Elementary Education until we find the means of separating the elementary school, in accordance with its true philosophical definition, from the various forms of the secondary school, and of causing Secondary Education to begin, as it should, at a much earlier date than at present, somewhere near the beginning of the present so-called sixth grade of the grammar school. To this end, we need most of all to attain a philosophical distinction between the elementary school and secondary schools, and to supplant by this our present meaningless and futile distinction, which knows no difference between them but the shallow fact that the one comes first and the other comes second.

Let me close by saying that I would not for a moment be supposed to deny the educational value of interest. Nor would I be thought to imply that Dr. Harris overlooks this; he only sees that there is something still more valuable. Interest is indispensable to successful education: you cannot teach the uninterested mind. But it is the very business of the teacher, and the very genius of the true teacher, to kindle interest; to know what is reasonable, what is for the highest good of the pupil, and to be able to rouse his interest in that, even when he has no interest in it by nature.

Thursday Afternoon.

The Association was called to order at 2 P. M. at the Congregational Church, President Barnes in the chair. After music by the California Quartet Club the President delivered the

ANNUAL ADDRESS.

REVIEW AND OUTLOOK.

One year ago the California Teachers' Association was entertained in the City of Santa Cruz. Our deliberations were presided over by one of the truest teachers and most genial gentlemen that our California teaching force could boast. To-day we are met for another three days of deliberation, and I trust that the same spirit of earnest desire to learn the truth which has characterized our former meetings may prevail here. As an introduction to our discussions, I should like to call your attention to what seem to me to be the most important educational movements of the past year, and the most pressing problems of to-day.

Within the year just closed we have had a general election affecting nearly all the educational officers of the State. As a body of teachers we have cause to congratulate ourselves on the results of these elections. They have given us as official head of the State department of education a gentleman thoroughly acquainted with the needs of our California schools, and devoted to the problem of meeting these needs. They have added to our State Board of Education the honored President of our State University and the head of the department of pedagogy—the same institution giving to this important board increased scholarship and strength. They have given us a slight increase in the number of women superintendents in our counties; and while we have lost some men and women we could ill afford to lose, we have retained a good proportion of such men as Linscott, Wood, Kirk and Greeley. All in all, the elections have brought us increased strength and hope for the future of democracy.

The continued hard times of the past few years have, of course, been felt in our educational work; but our interests have suffered as little as any in the community. Our higher institutions of learning, have had a steady continuation of the wonderful prosperity of the past four years. Able students have crowded the halls of our State University, and a fine class has gone out to play a leading part in the higher life of the State and the country at large. The legislature has appropriated funds, a site has been selected, and the affiliated college buildings will soon furnish worthy accommodations for the professional schools of California. At

Stanford, likewise, increasing numbers of strong students are demonstrating the fact that in the higher education of men and women California is to play a leading part. The phenomenal growth of interest in higher education in California is best realized when we remember that the number of college students taking liberal courses in the larger universities of California has increased in the past five years from about 600 to 2400, and that, with a steadily rising standard of scholarship.

Our high schools have followed close in the wake of the university movement. During the past year, new ones have been established; the old ones have been pretty generally strengthened; the standard of scholarship has been steadily raised; and in the near future the high school must become an integral part of our State system of education. The state which supports a system of rural school equal to, if not superior to, any other in the Union, and which gives its fostering care to a State University second to none, cannot much longer ignore the education of her sons and daughters during the four years of the high school studies.

In specialized lines of education, we have likewise made progress. The Cogswell school has been reopened; the Lick School has been reopened and dedicated to the service of training boys and girls into self-supporting manhood and womanhood along industrial lines. The new Wilmerding School is about to become a reality. A noble woman has given a manual training school to Santa Barbara. Throop has flourished. Stockton has built a manual training school, and similar schools are projected in San Jose and Los Angeles.

Our common schools have continued to be the special care and pride of our people, and in spite of the financial pressure the philanthropic kindergartens have been extended.

If we turn from the schools themselves to their setting we have still more cause to congratulate ourselves at this holiday time. In spite of the hard times, new buildings have sprung up all over the State. Oakland, our hostess to-day, has just expended $400,000 in new buildings, and the one in which we met this morning illustrates the high grade of excellence that characterizes the work. The new high school buildings at Santa Rosa and Santa Cruz and the new Normal building at Los Angeles, all express the same intelligent interest in education.

Schools and buildings are, after all, secondary to the teachers themselves. A teacher makes the school; buildings and books are but the clothes of education. Since our last meeting we have suffered some loss as is inevitable every year. Our president of a year ago has gone to a new field and large success attends him. California's loss is Minnesota's gain. Death has visited us; and James G. Kennedy, one of the brightest and most genial members of this association, has gone to his long home. Moulder has also been called away from his work, and during the next few days we shall be conscious of other vacant places in our assembly,—one of them intimately associated with the building where we met this morning.

To fill these vacant places, some new men have come to join us from other states. Two of these gentlemen are in the State Normal School at San Jose. But it is mainly among our own young men and women that new leadership has sprung up during the past year. One of our California teachers has been studying in Naas, the home of the Sloyd work; another has been studying at Jena, the home of the Herbartians; two or three have been at Cornell and one at Michigan. Each of these will bring home new ideas, new inspirations, new life.

In the two leading universities of the State, we have some five hundred students taking special courses in pedagogy, when five years ago we had none. Our Normal schools, especially those of Los Angeles and San Jose, are rapidly becoming professional schools in the best sense of the word, and San Francisco has determined that she must have either a modern Normal School or none. The opportunity for professional training in California is second to no other State in our Union.

This is the record of an achievement for a year, not as teachers, but as a great commonwealth, devoted to the interests of education.

But the problems that confront us are great, and will require not only devotion, but wisdom for the solution. First among these is the problem of supplies—money. Many parts of our State are heavily burdened with taxes, the expenses of education are very heavy and they often seem a legitimate object of attack. Retrenchment is the cry of the hour and yet I am sure I am right when I say that we have only begun to spend money as we shall spend it in education. The strength and wealth of a country must be sought in its people. The value of people lies in their intelligence. That country where wise people live, is rich, though the people wear home-spun and dine on homely fare. We are demanding that the untrained girl from the grammar grades shall give way to the well-trained woman from the normal school. We are demanding that the teacher instead of compelling the boy to memorize words and tables, shall train him into manhood with as much skill as we ask from the trainer of a trotting colt. This demand can be met only by reducing the number in classes and by securing training and brains in teachers. This means *money*. The fact pointed out by a recent grand jury that in one city, teachers have increased while enrollment has stood still, may mean simply that the city is keeping pace with the advanced intelligence of the day. It costs more to run our California schools than to run those of any other State. Thank Heaven for the fact. In consequence, we have the best common schools in the Union.

The next problem of importance is the training of teachers. Our whole system of certificating teachers must inevitably be changed. It is nothing less than wicked to put an untrained and inexperienced boy or girl in charge of a room full of growing bodies, minds and souls,—when a well-trained teacher is available. Our Normal Schools must as rapidly as possible abandon their academic work, and become truly professional schools such as those of medicine or law, and thus the State must provide us with well-trained teachers.

Of course, the problem of politics is always with us. Our system of school administration seems to me admirable, but I believe we must put more power into the hands of our State Superintendent, and of our City Superintendents in matters pertaining to the professional aspects of school work. A school system worthy to survive must always be in immediate touch with the people, but it is a shame when interested parties use the public interest in education as a means of furthering their own personal ends, be they sectarian, A. P. A., populist or what not. A public school man holding his office through the pressure of a clique or a party, is himself a menace to the safety of the republic.

The increasing number of women as teachers in teaching positions, and in high schools and universities as students to say nothing of their almost complete preponderance in the Normal Schools,—raises a delicate but most pressing problem. The same causes, social and industrial, which have brought it about that boys and girls in urban populations receive nine-tenths of their education from women,—are still operating, and with increasing power, I see no reason why, in the next few years, this proportion may not rise in our cities to ninety-nine one hundredths. We live by our admirations. Our admirations are largely formed in schools. We ought not to have a generation of men who have never learned to admire the masculine qualities in the Anglo-Saxon race. This is certainly the greatest school-problem of to-day, next to money. Can we ask women, under the existing social organization, to give their youth to a laborious and expensive preparation, and then to devote the years of their young and mature womanhood to school-work? Shall we rearrange our ideas so as to let a teacher live her social life as wife and mother, or shall we depend on a floating current of girls, who will devote a year or two of inexperience and unrest to work requiring the most profound wisdom and strength of mature years and large experience of life?

Some of these problems will be discussed here in this meeting. The curriculum, the certificating of teachers, the problems of a teacher's preparation, manual training and school hygiene. These will all receive attention from the gentlemen who have consented to speak to us.

The work of the afternoon had been planned to consist of addresses, bearing upon psychological questions, with an essay in lighter vein, as an interlude.

Papers were read as follows, by Wayne P. Smith, San Jose; Elizabeth A. Packard, Oakland, and F. B. Dresslar, Los Angeles:

SOME REMARKS ON THE PROFESSIONAL COURSE.

By Prof. Smith.

Very rapidly are the signs multiplying that in response to the increasingly complex conditions and demands now obtaining in the educational world, the ideal of the professional school for the training of teachers is beginning to take more definite shape. True it is, the creative and formative process which in course of time is destined to mold it into full and perfect actuality has by no means been completed, nor in point of fact is it now very far spent, yet the first and all-important fiat, "Let there be Light," has been proclaimed. While the original chaotic indefiniteness has very slowly yielded to the cosmic, organizing forces and tendencies, so that already growing order and definiteness can be discerned, even at the present stage of the process enough is known of the destiny and function of the normal or professional school to bring out in clear relief the main lines along which its own peculiar possibilities and ideals must and will be realized. Precisely in virtue of this light that has gone up to our educational public the view now widely obtains that the professional school must work out its destiny in training the teacher in two lines, namely, in the basal scientific and philosophical principles of education, and at the same time in the art or practical aspects of teaching. In close company with this view of the work of the Normal School is found the growing conviction that in so far as the Normal School departs from this its real aim and ideal, and engages in work purely academic—that is, work which is not employed primarily as a means of exemplifying or, illustratively enforcing, sound psychological and pedagogical principles and method, but is merely preparatory to such work—just so far does that school forfeit the only legitimate and valid excuse for its existence. The professional school, in order to fulfill the end for which it was called into being, must presuppose the work of the academic course as the indispensable condition of the realization of its ideal. And I am strongly inclined to believe with the Committee on the Training of Teachers,* that rigid insistance upon sufficient preparation for admission will go far towards the solution of the question of what studies to pursue, and also greatly relieve the tension of the controversy between academic and professional work. It is not, however, my purpose on the present occasion to consider the professional course in general, although in view of the increasing importance that is being attached thereto it might fairly command our attention and serious consideration. But accepting generally the position thus briefly indicated as to the destiny and function of the Normal School in the professional training of teachers, and at the same time dismissing for the nonce the practical part of the course and a very respectable part of the scientific, my purpose is to present as best I may a few reflections which, if they do not possess the stamp of novelty or originality, may at least serve to set forth in clearer relief three studies or factors which constitute the very heart and soul of the course. True, it is these studies, or at least two of them, get some attention in the professional course to-day, and one of these, psychology, is rapidly getting its true value and place in the course recognized, but the third, scientific ethics, has not, so far as my knowledge extends, received any save implied recognition, despite the fact that it is the culmination and completion of the entire course of study, and also of the most vital importance to the pupils.

Presumably every teacher who is in the least reflective has at one time or another attempted to get a satisfactory solution of the problem of *what* education is, as well as the so-called practical one of *how* to educate. Indeed, it may be fairly assumed that this is vital concern of every one who either is or intends to become a good and useful teacher; and on the other hand it is not unreasonable to infer that the scientific part of the professional training is designed to meet and satisfy, partly, perhaps, that need. Of course there is available an almost inexhaustible treasury of maxims and rules of "pedagogic method" and definitions of the meaning and objective of education; but it needs barely be stated that definitions, rules and maxims are of little significance or value apart from the actual process of their discovery or creation. The whole truth is never bare result of definition, but this result together with all the stages or moments of its realization. But to take one of the many statements of the meaning and aim of education in order to discover the real nature of the problem and the lines of study to which one may reasonably look for substantial aid, we may say that "education in general is the development of man's power of thought and action," or, in other words, the capacity to form and to realize a noble ideal of life; and the objective of all education is a certain quality of character. When we have said all this we have most plainly affirmed that the educational problem is really an historical, psychological and ethical one.

Or to go to the bottom of the matter, I am free to maintain that the conception of the meaning and aim of education is for every one determined by the conception one has of the ultimate nature of the universe, and of the true nature and destiny of man as a rational, free being. And the ideal of education can best be secured by the knowledge of those rational methods which are in full harmony with the typical forms of psysical activity, and by means of which the intrinsic and normal aim and perfection of human nature can be realized. In the last resort, education is grounded on philosophy, the science of the sciences, or the rational interpretation of the whole world of experience or reality. And every intelligent human being is a philosopher, has views, that is, as to the real nature and meaning of things; for it is the upshot of an instructive tendency to give reasons, however bad, for what is generally accepted on faith. The only difference between one who consciously and intentionally philosophizes and one who does not, is that the former is forever freed from the realm of mere authority, and blind faith in unreflected upon unproven dogmas, and stubbornly persists in the attempt to think clearly and consistently about the truth and meaning of things ; he it is who will *know* what the other merely *believes*, will judge, interpret and criticise what the other accepts without question or proof. Lessing once said with reference to the latter type, "A thousand to one the goal of their reflective thinking is that place where they tire of thinking."

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*In the Report of the Committee of Fifteen.

Such will always possess a shadow of knowledge however, and fondly parade it as their opinion, belief or conviction. But be that as it may, it is fairly evident on reflection that one's conception of the nature and meaning of the world of experience does withal determine one's interpretation of the meaning and objective of education.

If based on anything less than a philosophic interpretation of life as a whole, education must be abstract, imperfect, and run counter to the normal workings of the mind, resulting perchance in positive distortion and permanent disorder. Now will you kindly remark that I am not even suggesting that philosophy is a prospective candidate for a place in the professional course, or that one who knows little or nothing will, by making love to philosophy, gain that panacea which will cure all the deep-seated ills of ignorance. Philosophy can acquaint you with no new facts, nor is its mission to create or invent, or to revolutionize, but to know what really is. In the words of Plato, " The synoptical man, the man who has a conspectus of knowledge, is the philosopher; and the man who is not synoptical, who cannot see two subjects in their related aspects, is no philosopher." One must study science, history, political and social conditions, and thus with the philosophic spirit of openess of mind, patient thoroughness of work, and intolerance of all superficiality, each of us can in a very true sense become a philosopher, a "spectator," as Plato puts it, " of all time and existence."

To return to the matter which is our present concern, in order to unravel the tangled skein which human life presents to the educator, the most promising clue, I take it, to be found in the historic process of social development, which not only throws light on the present educational views and practices in all their varieties and phases, but gets light in return. In other words, it is only by a thorough investigation and understanding of the past that one can hope to know the present and clearly discern the direction of the process in the future. The present world of thought and action embraces somehow all and singular of the results or attained truths that have preceded it. Nothing is utterly lost or destroyed. The whole body of the thoughts and principles of action of former life is in some way preserved, though all these detailed creations of past human thought have been reduced to mere shadows of what they one time were. It is in the length and breadth of history that the consolidated problems, the tough knots, which we meet in the educational world of to-day, are dissolved into a multitude of less difficult problems, each appearing in a greatly simplified and different form, while the solution of one affords the necessary help towards a clearer and truer appreciation of another.

To understand fully the constitution of our present world of thought and action, especially as it is presented to the teacher, to get a vital and sympathetic insight into the developing life of the individuals intrusted to his charge, it is necessary to re-traverse and spell out the large letters in which the main stages of the development of the race are recorded, or ideally to reconstruct the past as an essential part of a living rational system. And this is in order that we may be the better able to deciphet and interpret the small letters of the life history of the individual ; or discover the actual value and significance of the delicate tracery and shadings of the present world; which were once living and useful habits of thought and action, systems of theory and practice, and which for that age and people, were independent and complete in themselves.

History will in short reveal to every serious student of life and education at least two important facts, namely: the meaning and objective of education in its process of realization in all the grades and phases of individual and social life, and a general knowledge of the main stadia and their value, in the education of humanity as a whole. It is a common statement that the mental development of the individual recapitulates in an abbreviated and consequently somewhat confused way, the chief grades or epochs of the evolution of the mental life of the race, and in a way closely analogous to that whereby the embryonic history of the human being reproduces the main ancestral phases or stages of organic development. True it is, there are important modifications and variations of the race record in the individual's psysical life, as is also the case in the history of the embryo. As a recent writer* very clearly puts it, "The record is indeed a history, but a history of which entire chapters are lost, while in those that remain many pages are misplaced and others are so blurred as to be illegible; words, sentences, or entire paragraphs are omitted, and worse still, alterations or spurious additions have been freely introduced by later hands, and at times, so cunningly as to defy detection."

Indeed, when we come to consider the development of the mental life of the individual it may be wise to take a still more conservative view as to the parallelism between individual and race development; and yet even if it be true that the life history of the individual consciousness does not recapitulate the main functional epochs or stages in the historic evolution of the race consciousness, the conclusion is still inevitable that man has developed psychologically as well as biologically, and that our psychological insight into the growth and development of the human mental life is essentially dependent on our knowledge of the psychic history of mankind, in precisely the same way that the morphology of the human organism would have to depend on animal physiology as its supreme guide and adviser if the embryonic history did not reproduce the chief functional stages of the animal ancestral series. But the evidence is almost cumulative that psychological as well as physiological recapitulation does in the main hold true. And the explanation that has been advanced recently of physiological recapitulation, that, namely, each historic stage which has been really, and generally useful in the evolution of an organ, is necessary as a stimulus to the succeeding stage in the growth of the organ, may prove to be equally true in the development of the conscious life of the individual, that each form of functional activity that has been generally indispensable in the mental history of man as a mediating stage to higher or more complex levels of life is necessarily reproduced in a miniature way in the development of the individual; and though rudimentary and functionless in the mature life; they are the indispensable conditions of the full realization of the permanent psychical functions of the adult. Insight into the historic growth and education of humanity from the rudimentary beginnings of the infancy and childhood, to the complex achievements of the maturity, of the race, as indicated for instance in the primitive religions, nature myths and explanations of the phenomena of, and in, nature, or in the vivid imaginative coloring and the dramatic description of the most commonplace events and sights, transforming the prosaic into the poetic and fanciful; in the early phases of deception, ingenuity or invention and discovery; in the wanderings and rebellions of the individual and in social enlargement through the relationships of the family, the community, the school, the church and the state; or finally in the mature devotion to scientific discovery, the fine arts and philosophy,—this knowledge of the meaning and value of the stages of sociological evolution throws in-

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*Marshall, *Biological Lectures and Addresses*, *p. 305*.

valuable light upon the psychological development of the individual, and indeed upon psycology in general. And it is in wise difficult to perceive the great importance of this knowledge to the educationist in general and to the teacher of children in particular. Equipped with a pretty thorough knowledge of the course of sociological development and of the psycological sciences or at least possessed of the genuine psycological spirit, will best and most fully reveal the order and connection of the various psychical functions in the development of the total mental life, and the proper psycological place and method of presenting those *artificial* conditions or subjects which will appeal to the dominant interests and purposes of the growing mental life. This knowledge it is which will enable the teacher intelligently to create and "to supply the conditions which will enable the psychical functions, as they successively arise, to mature and pass into higher functions in the fullest and freest manner." (1) The teacher thus trained is most likely to become a good teacher of children, who will know and enter sympathetically into their childish views and explanations of the objects and happenings in nature, will appreciate their little strivings and plans and ideals, and consequently be the better able to furnish the requisite aid and conditions for the normal and free development of their mental powers through their own self-activity. For the world of childhood, fairly reflected in fairy tales, and very markedly in the growth of language, is a miniature reproduction of the primitive world of humanity as is revealed in the evolution of linguistic expression and in the nature myths. In a word, sociological evolution and psycology furnish the key to the development of the mental life of the individual, not only, but to education in all its aspects and diversities as well. To quote the words of Hegel (2) with reference to the whole matter :

(1) McLellan and Dewey, PSYCHOLOGY OF NUMBER, p. 18.
(2) Hegel, WERKE, Bd. II, S. 22.

" The individual reproduces the past in much the same way as one who takes up the study of a more advanced science, reviews the preparatory lessons which he had long known, in order to get again clearly in mind their content and meaning; he recalls them without being interested in, or studying them, for their own sake, but as a means to the more advanced work. The individual must in a similar way recapitate in content and meaning the stages of the development of the universal mind, mere stages on a course that has long since been worked out and made easy. And thus in point of learning, what in earlier ages engaged and tasked the mature minds of men is now reduced to the level of lessons and exercises and even games of youth ; and in the progress of the schoolroom can be recognized the historic course of the education of the world copied, as it were, in shadowy outline."

When once education is recognized as grounded on sociology and not merely on some one of the special sciences, then the other aspect of history, that is, the history of the theories of education, will be made more intelligible and useful ; and it will cease to be studied as mere collection of opinions and maxims of great educators, wherein one may as it were, have heard all the tones of the symphony but never have grasped the one essential thing, the development and harmony of the whole. Presented in the traditional manner, one is the more likely to perceive the differences and contradictions of educational systems, than the progressive evolution of the true principles of education. But put education on a sociological basis and then the real significance and value of any theory of education and the relation of one theory with another will be made evident. So, too, will it become clear that one cannot now be merely a follower, say of a Rosseau, or a Froebel, or a Herbart, or any other individual, one must rise above the eccentricities and imperfections of any special doctrine or system, and see that this or that system is but a single factor in the total life and education of man. At the same time this will be the highest and truest recognition of the greatness of those who have discovered and expressed what was for that day and people the complete and perhaps final system of educational principles. Yet no historic period with all its truth, is for the whole social consciousness, ultimate or complete, but it is taken up and absorbed by the total life of man as a necessary stage or factor in its progressive realization. The most concrete and sufficient theory or rational statement of the meaning, aim and method of education, is that which contains in an organized whole all former theories in their completed interpretation and truth, is indeed the product and completion of their intrinsic purport and implication. The content or meaning of education understood in its completeness, together with the present direction and aim, will involve nothing less than the rendering fluid of the present in the stream of history, wherein one may observe the gradual bringing to consciousness of the fundamental principles that are ever operative in the educational process.

The objective of all education is in the largest sense the formation of a certain quality of character, that is, ethical. After having made an historical study of the educational process in all its aspects, and a psychological study of the typical development of the orderly life or organization of the psychical functions as they are manifested in infancy and childhood, and in the conscious intellectual growth, that is, in the processes of perception, memory, reflex and voluntary attention, reasoning, the course of the professional school must either furnish the opportunity for the teacher to realize in consciousness what ethical ideas he has labor for, and their real value, to get in short a rational statement of "human relationships in action," with an estimate of their relative significance and importance in the whole social life, or the course must otherwise remain incomplete and fragmentary, failing to supply that which is confessedly the culmination and fulfillment of its all-directing and sustaining ideal. The educator labors to realize in his pupils certain ethical ends, be it a worthy fellow-pupil in the life-process of the school, a good citizen in the community, state or nation, and a valuable worker in the social world. Will it then not be of the greatest value and importance for the teacher to make a pretty thorough study of the ethical relationships of this complex social world in which we live, act and have our being, a world in which the many "are made perfect in One," that is, the weal of one is the weal of all. and in which the most complete differentiation of the functions of the individuals is the most perfect organization of the diverse and yet related activities. And ethical theory is precisely the rational analysis and realization in consciousness of the relations, and their relative worth, of men in action within this ethical world.

In any concrete act or situation is centered all ethical theory. The first step in ethical interpretation is to get the clearest possible understanding of the actual situation in order to the judgment of what should, or ought to, be one's conduct in just this set of conditions. Only on the knowledge of what is, that is, the actual necessities, circumstances and possibilities of any concrete practical situation, can be based the ethical judgment of what *ought to be*. The other steps of bringing clearly before the mind the typical or universal aspects of the practical judgment, as the emotional and sentimental and intellectual, with the estimation of their proper place and significance in human action, will very naturally prepare the way for the consideration of the more complex relations, as for example, obligation, rational freedom, moral obligation, moral law, the true meaning of motive and others, all in the same concrete practical way of dealing with actual situations or acts. A knowledge of just these ethical relations is evidently necessary, for, to quote the words of Pres. DeGarmo in his excellent work on *Herbart and the Herbartian.* "In order to develop moral ideals and to transform them into rules of life, the teacher must have a clear consciousness of the fundamental ethical ideas or moral principles that find their embodiment in conduct." The supreme aim of all study of ethical theory in the professional school should lead, on the one hand, to the working out of a method of analysis of actual ethical relations or situations in order to be able to judge rationally *what* ought to be, and *how* to realize this ought or ideal, and its relative value; and, on the other hand, to a good understanding and appreciation of the fact of the solidarity of society, or the identity of all human interests, that, in other words, the interests and well-being of one are the interests and well-being of all, and the complete fulfillment of the aim of the social system is attained only in the full and free realization of the individual members as ethical, rational beings. This, I submit, must lead to a new and deeper interest in, and a clearer consciousness of the meaning and worth of, "human relations in action," the objective relations obtaining within the existing ethical world; or to put it with special reference to the teacher, of the ethical relations of the individual members within that particular ethical institution, the school, which is but a specialized expression of the unity and identity of interests, desires and purposes, is in a word the practical social world in miniature. For within this organized unity of activities is focused the whole multitude of ethical relations.

Briefly now to sum up the whole, the significance of the history of the mental development of humanity and of educational principles and theory as the effort to discover and express systematically the meaning and aim of education, is that the educator will find, on the one hand, the key which will make intelligible the mental evolution of the individual life which in the main recapitulates the functional epochs in the education of the race, and, on the other hand, will put him *en rapport* with the real meaning and tendency of the educational process of to-day. Psychology, general and genetic, has a special pedagogic importance in giving insight into the normal development of the psychical functions of the individual organism in their order of manifestation and connection. All this will enable the teacher to supply at the right moment the proper conditions and direction for the successively appearing functional activities of the developing mind. In this way knowledge of sociological evolution plays into the hand of psychology as well as conversely, and both history and psychology prepare the way for ethical theory which is the understanding and interpretation of actual situations, of ends to be realized and their real value, and also of the ethical relations of the individual members in their inter-action within the life process of the school. In a word, my plea is for the more thorough training of teachers in the scientific and reflective aspects of their vocation. And the fundamental factors in this training are, I conceive, the history of the universal life and development of man, the psychology of the mental evolution of the individual life, and the ethical theory or interpretation of the ends to be realized, of the relations of men in action within the practical world, and also of the intrinsic value of the moral and social ideals the teacher has to serve.

THE POET AS A PILGRIM.

ELIZABETH A. PACKARD.

To study literature in the schools formerly meant to memorize numerous dates, names and second-hand criticisms. Since that method was relegated to antiquity our classes have been occupied, more or less, in dissecting short, isolated masterpieces, doing this so thoroughly as to reveal their hidden beauties, or alas! sometimes to conceal them permanently. Now a third stage has been attained, and while still insisting on the poem or essay itself as the prime essential, we are learning that English, like other subjects, is treated best as a unified whole, instead of being left merely a pot-pourri of succulent scraps. Moreover, if we are not to fall hopelessly into the educational rear, we must regard the boundless possibilities for correlating English with other departments, and its inseparable connection with general history.

Not long ago a High School senior, searching through a cyclopedia of American biography for the writer of Bacon's essays, read the account of Leonard Bacon, and then earnestly inquired if he was the Lord Bacon for whom she sought. You all are accustomed to such instances from ordinarily intelligent pupils. Is it not perfectly possible to complete the average grammar school course without having the faintest notion whether Milton preceded Virgil, or Virgil, Milton, or whether the two were contemporary Americans? Mrs. Mary Burt, the well-known Chicago principal, has proved from actual results that children not yet in their teens, can be taught to form a birds-eye view of the most important of the world's literary landmarks, and find pleasure in so doing. "No man liveth unto himself alone;" and no author can be understood properly until we come in touch with his personal life, as that of a dear friend, obtain some idea of the steps in his growth, perceive something of the influences that made him what he was, and see a little of his influence upon others. Burke, Tennyson, Lowell, removed from the history of their times lose one-half of their significance. It is well for us all to know that there were great dramas two thousand years before Hamlet, and great epics two thousand miles east of Milton's library. It is better to comprehend how each author is "heir of all the ages;" how Longfellow's melody gathered its notes from wider range than the echoes of Harvard and Bunker Hill; that they came from Theocritus, Horace, Provençal troubadour and German minnesinger, from the Renaissance and the Reformation. Such studies, made ever so lightly, will serve as a telescope to extend immeasurably the outlook of our High School boys and girls. If this paper gives some little suggestion of one way by which this broadening correlation can be gained, each of our pilgrims would feel that "not in vain he wore his sandal-shoon and scallop-shell."

One February day, two California teachers started southward from Naples to visit these grand temples of Neptune, that, probably before the Parthenon, held sentry at Paestum by the Tyrrhenian sea. The night was spent in a hospitable inn, just over the cliffs from the home of the Sirens. Certainly there was witchery in the air, for under the level sun the landscape took on all the impossible tints of blues, yellows and purples that one sees nowhere, except in impressionist paintings, and then declares could never exist in nature. Sitting down at dinner these Californians looked up to meet the calm gaze of a familiar countenance.

One of them exclaimed, "If we were anywhere else that would be William Cullen Bryant!"

"It is Bryant, madame," quickly responded the head waiter. "He stayed with us two weeks on his way from Amalfi, and was so charmed that he sent us the portrait. And, madame, in the salon you will see, besides a letter from Signor Bryant, the portrait of the poet Longfellow. He was here twice, also, and his son brought the picture yesterday, because he said Signor Bryant looked lonesome."

And there, in the little town in the midst of the Salernian mountains, were the two home faces that adorn so many of your classrooms.

Bryant and Longfellow are among the latest of the poets who have crossed the seas, to drink deep inspiration at continental fountains or returned to enrich forever our English tongue with treasures garnered from many shrines. As Palestine was the Holy Land of Christian pilgrims, so Italy is the Holy Land of art and song, and endless has been the number of its devotees. Let us follow here and there an English poet on this pilgrimage of love.

The first who naturally appears before us is that shrewd business man, keen, laughing observer, and true lover of all God's creatures—Geoffrey Chaucer. Perhaps he was called to Italy for purely diplomatic purposes; nevertheless it was a mission of the highest literary consequence. Look for a moment upon the Italy which he saw. Its paved streets and marble palaces must have been a surprise to a guest coming from the mirey roadways and rude dwellings of Fourteenth century London. The ethereal spires of Milan Cathedral and the vast Duomo of Florence were rising in their grandeur; while Giotto's exquisite bell-tower already lifted its head heavenward, like some tall lily. Though the cathedral builders had not ceased, Christianity seemed losing ground. The popes were in half captivity at Avignon. It was not long since Dante's body had been buried among the dim Mosaics of Ravenna. Rienzi's effort to revive a patriotic commonwealth at Rome had just failed. Tyrants were subverting the privileges of the Lombard republics, and men were turning in disgust from the present to seek new hopes in the revival of ancient thought. All Italy was beginning to palpitate with the *Vita Nuova* of the coming Renaissance.

There still lingered upon the earth, Petrarch, the first torch-bearer of the new learning. To him came the English traveler, and they tell us that from the lips of the aged poet, Chaucer first heard the story of patient Griselda. We may believe as well that there were reminiscences of Laura and many words of sage advice concerning poetic form and poetic aims. To Petrarch the art of letters was a priesthood. The poet-teacher was bound to discover truth, to make that truth attractive to the world, to keep his own life in harmony with that truth, and to imprint his character upon the ages. Had ever mortal teacher higher ideals? Besides Petrarch, Chaucer probably met the former's pupil and fellow-humanist—Boccaccio, prince of story-tellers. At any rate, we know that to these leaders, we are indebted for much of the substance of the "Canterbury Tales," and more of their inimitable grace of expression. As a well-known critic has declared, "Without a Chaucer in the Fourteenth century, there could have been neither a Milton in the Seventeenth, nor a Keats in the Nineteenth," and but for this Italian sojourn, Chaucer's work must have lacked to a degree its fine artistic quality.

During the two troubled centuries that ensued, he had many followers, as both writer and traveler; among them we note especially the unhappy comrades, Wyatt and Surrey, called "the twin stars of the dawn," one of whom introduced the sonnet and the other blank verse from Italian into English literature. Still to find a mate for Chaucer we must go forward until the baptism of blood and fire had consecrated the

Elizabethans. With them, however, life at home was too absorbing for them to wonder much abroad except to win new lands for their queen. They sang of England's heroes and her glory, and the passions of her growth. Of all that mighty band, one alone occurs to us as a foreign pilgrim—Sir Philip Sidney. And in him we are apt to overlook the poet in doing honor to the gallant knight of chivalry, whose blood ebbed away upon the field of Zntphen. It is hard to believe that Shakespeare never strayed in the flesh beyond the Channel. Though the Two Gentlemen of Verona are somewhat hidden in obscurity, and shrewish Katherine long since became a meek wife to her Paduan lord, the house of Juliet attracts more tourists in Verona than Can Grande's castle, and even the patent fraud of her empty tomb is a fruitful source of revenue to the ubiquitous guide. In fancy, at least, the dramatist visited many shrines, and conversed thereat with "all sorts and conditions of men."

Eight years ago before Shakespeare's death there was born in a dull London street, one who, more than any of his predecessors, felt the sacredness of the poet's mission and lived the dictum of Petrarch that men must guide their own course by the double lights of culture and conscience.

> " He that hath light within his own clear breast
> May sit i' the centre, and enjoy bright day."

So speaks the youth of "*Comos.*" In "*Lycidas*" we find the nymphs and shepherd of pagan Greece, stern Puritan invective, and Christian faith combined, in a manner evidently borrowed from the Latin verse of the Italian Renaissance. No one ever crossed the Alps better prepared to profit thereby. But what an Italy! ground under the iron heel of Spaniard and Austrian. The Inquisition at Rome is ruler over the utterances of men. It is only beneath bated breath that Galileo dares whisper, " The earth doth move." Still there are famous men of letters to welcome the polished English student, and open to his delighted eyes the storehouses of the past. We can seem to see him reverently scrutinizing the prophets and sibyls of the Sistine Chapel, lovingly touching the illuminated manuscripts of the Laurentian Library, and standing in hushed silence in Michael Angelo's chamber of the dead. You know those reclining statues, dim Twilight, slumbering Night, wearily awaking Dawn, and unfinished Day—the gigantic forms through which the sculptor told the sorrowful shame of the Medicean thralldom. Did they not remind John Milton of the dangers threatening English freedom?

From these foreboding shapes he turned to call upon Galileo, blind prisoner of the Inquisition, in his villa at Arcetri. Watch for a little the young man climbing the winding lanes shut in by high stone walls, overtopped by crimson roses. Soon he reaches the hill-top, to meet Galileo in his vineyard by the star-tower. At their feet lies Florence clinging about her splendid cathedral group, her towers encircling her like a garland. Here and there gleams the Arno between its four arched bridges. The afternoon sun wraps the whole city in a golden haze, while it nestles in its amphitheater of olive-clad hills, dotted with princely villas. We can imagine how the two talked on until the moon rose behind the Appennines, and Milton was bidden to mount the narrow staircase, and behold for the first time our satellite transformed into another earth through the magic tube that was the first ancestor of Lick Observatory. Little could Galileo have realized how great a soul was that with whom he held converse. And Milton—did any premonition come to him that ere long he too would " fall on evil days and evil tongue, to live in blindness and in solitude?" Tidings of strife caused him to hasten home to throw himself with all his power into the battle of liberty. But

Dante was ever a stern inspiration, and even to the end pleasant memories abode of these Italian hours. We read that Satan's shield

"Hung on his shoulders like the moon whose orb
Through optic glass the Tuscan artist views
At evening from the top of Fesole,
Or in Vald'arno, to descry new lands,
Rivers, or mountain on her spotty globe."

When the tremendous issues of Puritanism had engrossed all England for a time, and then in the re-action the white heat of civil and spiritual life had passed away, with it grew numb the heart of English poetry. We pass over the School of Dryden and Pope as lightly as did they over the deep questions of the soul. The chill Court of Louis XIV held them in icy fingers.

Most of the geniuses of the Eighteenth Century were too much hampered by poverty to seek culture beyond London book-stalls. Yet none of us forget Addison, or Gray, or that fascinating literary vagabond, Oliver Goldsmith, who started out to make the grand tour with one spare shirt, a flute and a guinea. The guinea promptly melted away, but the flute carried him on a two years' pilgrimage, in the course of which he secured a medical degree at Padua. It must have been granted, because Portia's plea still lingered in the ancient halls: "The quality of mercy is not strained." He obtained also material for the graceful verse of the Traveller, who from his Alpine crag surveys his wanderings:

"My fortune leads to traverse realms alone,
And finds no spot of all the world a home."

.Goldsmith was laid in the humble grave by the Templars' church just as Edmund Burke was thundering against American taxation—a subject that doubtless seemed as remote to the gentle wanderer as the tigers with which he settled Georgia. Freedom's battle soon absorbed the world. When Voltaire won the plaudits of his hearers by declaring, "I am the son of Brutus, and bear graven in my heart the love of liberty and the hatred of kings!" he voiced the feelings of two nations—new-born America and feudal France. All other interests sank into insignificance before the claims of individualism. As we read the calm philosophy of Wordsworth's later years, it is hard to realize the wild enthusiasm which possessed him in his Parisian days, when he, together with Coleridge and Southey, was whirled into the vortex of Democracy. Thence came in part his thoughts of the brotherhood of man; and thence, dismayed by the unbridled excesses of France, he looked away to find peace in his sister's companionship at Rydal Mount, and in the lessons she and nature taught him that

The primal duties shine aloft like stars,
The charities that soothe, and heal, and bless,
Lie scattered at our feet like flowers.

To such haven of the weary soul never arrived these two knight-errants of the Revolution—Byron and Shelley. Flinging themselves away from that England which was a harsh mother to her wayward sons, their poetry is filled with the passions of more southern climes. Byron and Shelley, "confined and pestered in this pinfold of their native island, are inconceivable. The lightning flashing from peak to peak around Lake Leman, the teeming association of the mouldering Coliseum, the tragedies of Roman nobles and Venetian doges—these were more harmonious to such stormy spirits than the whitening hedge-rows of Oxfordshire meadows, or placid Westmoreland lakes."

In Venice, Byron meets us at every turn. We encounter him at evening, floating in his gondola upon the pale lagoons, where the orange and red sails of the fishing boats recall the dazzling pageants of the city's wedding days, and the argosies that once thronged her harbors, while the chimes from a hundred towers carry one back to the time when Ocean's daughter was also Ocean's queen. He forms a part of the general picturesqueness of Venice—the fairy city that resembles nothing so much as a cluster of glowing sea shells borne upon the opal waters, blending in one perfect whole with the sky of opal and sapphire. At the quaint island convent of San Lazaro, where Byron attempted a fitful study of Armenian, his name is kept green by the kindly monks, though it must be confessed that he is remembered chiefly as an idle scholar. Doubtless he found a more congenial occupation in mad gallops up and down the sandy stretches of the Lido (the narrow island separating the lagoons from the sea), in what Howells terms "his usual conspicuous solitude." The Adriatic was companionship enough, and from these lonely hours came some of the noblest song-bursts of Childe Harold.

Venice, we, like Shelley, are glad

"That a tempest-clearing swan
Of the songs of Albion,
Driven from his ancestral streams
By the might of evil dreams,
Found a nest in thee, and Ocean
Welcomed him with such emotion
That its joy grew his."

Close by, Shelley found his own refuge in the same Enganean hills where Petrarch once dwelt. But neither the snow-capped Alpine summits nor the fertile Lombard plains sloping away to many-domed Padua, rescued him from brooding melancholy. He watched the peasants reaping their rich harvests, and the superb cream-white oxen drawing the purple vintage between shining lines of poplars, and his heart swelled with indignant sympathy for the hundred cities chained by the Austrian. Nor could he escape from the bitter certainty that "Men must reap the things they sow." No other end could have been so appropriate for the storm-beaten singer as to be laid by pitying billows upon the Mediterranean shore, and then purified by fire, while the sensitive dreamer's loving aspiration for man's ideal good

"Doth float
Upon the silver waves of thy sweet singing
* * * * * *
Into a sea profound of ever-spreading sound."

You all know how his heart was carried back to England, and the college that expelled him in horror now points with pride to the lovely memorial chapel she has built; but his ashes remained in the Italy which he loved.

Now come on the twenty-first of January to the entrance to the catacombs of St. Agnes, a mile outside the gates of Rome. We pass through a court and down wide marble steps strewn with box twigs, to the ancient church of St. Agnes. Before the close of the regular morning service, two snow-white lambs, decked with red Christmas ribbons, are brought to the high altar and duly consecrated to the fair girl saint. Sweet choir music and burning incense lull our senses until we become

"Hoodwink'd with farry fancy all amort,
Save to St. Agnes and the lambs unshorn"

And to the Secret Sisterhood.

While they, St. Agnes' wool are weaving piously

For the Holy Father's pallium. Who except Keats could so have sent us to sleep "in lap of legends old?" Who except Keats could have merged himself in the mystery of the Nightingale's song, thrilling with soft Southern melody, until he cried

"Now more than ever seems it rich to die,
To cease upon the midnight with no pain,
While thou art pouring forth thy soul abroad
In such an ecstacy."

Few visit Rome without going beyond the walls to the verge of the lonely Campagna, until they come to the spot where the huge pyramid of Cestius keeps guard over the little Protestant cemetery. Let us cross the tiny moat and linger among the pathetic graves, where daisies and violets try to supply the place of distant kinsfolk.

The remains of Shelley and his friend Severn lie side by side. A little way off is another mound. His is a cold nature that feels no quick-springing tears on reading the epitaph, "Here lies one whose name was writ in water."

When poor Keats dictated that as the summary of his life, he forgot his own lines, "The poetry of earth can never die," and "A thing of beauty is a joy forever."

A host of late pilgrims crowd upon us—Landor and Leigh Hunt, Clough, George Eliot, and the prose poet Ruskin. Each name is indissolubly joined with Italy, but we have time for two only, that must not be passed by. And with them ends the bede-roll.

Near Boccacio's dwelling in a grim street, under the frowning walls of the Pitti palace, may be seen an unassuming house, called Cassa Guidi. A tablet on its front bears this inscription, "To the memory of Elizabeth Barrett Browning, the English poetess, whose verse was the golden ring linking Italy to England. With all a woman's heart she made the cause of Italy her own." It was the time when Swinburne called to Michael Angelo's giants:

"Is not thine hour come to wake, O slumbering Night?
Hath not the Dawn a message in thine ear?"

They did rouse at the summons of Cavour and Garibaldi, but when the third Napoleon, like the first, proved traitor in the shameful treaty of '59, the marble film seemed to close down again. Mrs. Browning's two longest poems, "Casa Guidi Windows," and "Aurora Leigh," are the direct result of her Tuscan residence. The silver Thames was less real to her than the tawny Arno. Scarcely a spot in Florence but takes new interest from her pen, yet it was not the beauty of the city so much as its oppression that moved her most. Alfieri himself could have written with no more patriotic fire than she showed in her "Mother and Poet," and ringing welcome to Victor Emanuel. When she lost hope of justice, among nations, it revived as she looked into the blue Saxon eyes of her own baby Florentine. As the sweet child faces so often are to all of us, he was God's witness to her that in the end right will prevail.

A few months more and the mother was lowered beneath the Florentine violets. But the husband, to whom she wrote:

"I love thee with the breath,
Smiles, tears, of all my life, and if
God choose, I shall love thee better after death."

Before he died in his Venetian palace, Italy for two decades had been free, from the Alps to the Adriatic. Deeply in sympathy with the liberation of her shrines, and with all the spiritual questions of our latter-day existence, Robert Browning has been an equally sympathetic student of Italy's mediæval greatness. Has any one evinced more subtle insight into the genius of the Roman Church than is displayed in "The Ring and the Book," to say nothing of many short poems? Where is better interpreted the spirit of mediæval art than in "Fra Lippo Lippi" and "Andrea del Sarto?" The modern painters fail to hold us as did those of the middle ages, because they have forgotten what Botticelli and Leonardo knew—

> "A man's reach should be higher than his grasp,
> Or what's Heaven for?"

Again, take away from Browning's poetry that which is plainly traceable to his Italian pilgrimage, and we find how irreparable is the loss.

It is a long path from the gracious story-telling of Geoffrey Chaucer to Browning's insistent personality and grapple with the problems of the nineteenth century. Each of the intervening pilgrims has done his part in lighting the way of his successors with a flame often kindled at far-off altars.

In the Poets' Corner of Westminster Abbey, between the memorials of Longfellow and Milton, at Chaucer's feet, lie the two master-singers of our generation—Tennyson and Browning. The last rests beneath a slab of Italian marble, upon which, with rare fitness, his artist son has intertwined the English rose and Florentine lily. Italy may be grateful indeed to the English and American poets who eloquently have sung her charms and espoused her cause in days of trial. And yet their tributes have been small return to the country that lent a Columbus to discover the western world across the seas; a Petrarch, to rediscover the lost world of classic wealth, and a Galileo to unveil a new heaven to wondering man; the land of Dante, Raphael and Michael Angelo; the Holy Land of art and song; the "divinely appointed birthplace of the modern spirit."

THE NEW PSYCHOLOGY AND ITS PEDAGOGICAL SIGNIFICANCE.

PROF. DRESSLAR.

Obviously in the time allotted, a full discussion of this subject cannot be made. Therefore what is said here must be understood at the outset as a partial and inadequate exposition of the subject announced. I shall only consider some of the phases of the subject which have especially appealed to me in my work in the Normal School and in educational work generally.

In a certain broad and fundamental sense, there is no new psychology. That is to say, there is no complete systematic presentation of the facts of mental life which have either been discovered, verified or related through the effort of the new methods of psychological inquiry. It is not a new psychology in the sense that it is independent of the old. Rather it is a method devised to supplement, refine and correct the results of the older method of introspection. Introspection must always remain as the cardinal method of study, but as long as it is applied alone there will be two little opportunity to distinguish between the facts as they exist and mere opinion. The new psychology does not pretend as yet to be able to test all opinions concerning the mental life, but it is full of hopefulness that in time it may be able to penetrate deeper and deeper as its methods are refined, to the end that bye-and-bye there shall be less room for mere opinion and a greater body of indisputable facts out of which to construct a better psychology.

The new psychology does not decry the tendency of the human mind to speculation, but insists that the results of its speculations be tested by the facts. Indeed, the very tendencies of the mind to speculation and philosophizing become interesting data for the scientific study of mind, and the psychology of philosophy which is yet to be written will reveal to us principles by which we can correct our personal equations with a greater degree of accuracy. It is foolishness to decry and condemn the results of centuries in any line of thought and especially from the standpoint of some new departure. For of necessity, such a standpoint always shuts out the possibility of seeing things in their proper perspective. There are pages not a few in Aristotle's Psychology which are as true and in a sense as new as those to be found in the writings of Wundt or Höffding. The thing which the new psychology is needing more than all else at present is to be delivered from its over-zealous friends.

One of the valuable features of the new psychology thus far is its attitude toward the truth and toward the problems of mind which it seeks to solve. In fact, its origin can only be explained by saying that it is a necessary result following from the scientific spirit which in these latter days is modifying all our methods of seeking after truth. Those of the new school who are wont to say spiteful and mean things about the whole of the old psychology though the old be largely metaphysical, are thereby forfeiting in a great measure the right to their title. It is much easier to pass over the dogmatism of the metaphysical *philosopher*, than it is to forgive the radical narrowness of some who are called disciples of the new school. It is expected that the former will theorize and imagine, but of the latter no such latitude is permitted. The philosopher must ever depend on the scientist for verification. One asks a question, the other finds the answer.

The new psychology like all advances in knowledge in *any* line, has been subjected to many unjust criticisms. It, too, has been accused of "corrupting the youth." It has been called "a psychology without a soul," with the implied meaning that it does not believe in a soul. The injustice of this remark would be no greater, were it applied to any other branch of scientific endeavor. It is no more the province of the new psychology to discuss ultimate things of the soul than it is the province of physics. These imputations need no serious refutation because they must needs be made. As long as psychology takes for its data the phenomena of mind, it must of necessity turn over to metaphysics, the questions which relate to the ultimate causes of such phenomena. To make this separation between metaphysics and psychology and to furnish as was said above a method for supplementing and refining the methods of introspection comprehend the chief values of the new method.

Another difficulty under which the new psychology has labored and must continue to labor for some time to come, is the sweeping condemnations which have been heaped upon it, by those whose minds have been made more or less impervious to truths other than those compassed by their own personal philosophy. Indeed one of the results of the new psychology is the emphasis given to the fact that a mind nourished by and developed through some personal theory is thereby functionally disqualified from giving due weight to evidence running counter to their

bits of thought. And yet this difficulty has been a blessing in dis-
ise. It has prevented much error and false interpretation. I say per-
nal philosophy because the results of introspection are always deeply
ged if not wholly colored by the personality which has brought them
the light. The old psychology has been the most personal, the most
dividualized of any of the branches of philosophy and hence there
ust of necessity come a struggle before any part of its personal coloring
n be given up. No true experimental psychologist can decry metaphy-
s as such, but sets for himself the task of finding the facts of mind and
eir relationship to each other, in as direct and impersonal a way as possi-
e. Hence he needs no metaphysics save to make his hypotheses. In set-
g for itself this task the new psychology has brought itself face to face
th the difficulties innumerable, but difficulties which must be overcome
fore any marked progress can be made either in old or new psychology.
say that it has surmounted comparatively few of these difficulties, is
ly fair to the truth. But many of these could never have been sur-
ounted by introspection alone. The experimental psychologist of to-
y is at work during a period of transition from the old to the new.
is opportunities are great but the demands upon his courage, his dili-
nce and his insight are far greater. 'Twould be unwise for him to
glect the light already at hand, but it is mere scholastism to push
ide the opportunities for scientific investigation and tenaciously cling
hair-splitting discussions which have long since lost any practical
aring on life.

Coming to the pedagogical side of the question we may be pardoned
few general words as to the value of psychology, both new and old to
e teacher.

In the first place, the study of psychology develops in the teacher
e habit of observation and careful judgment in things mental. Were
ere no more potent reason than this for the study of psychology, the
ork of the teacher would be poorer without its help. The teacher is
lled on each hour of the day to unravel the unsystematic thought of
me child to the end that he may rationally supply its needs. Any sys-
matic training in this sort of work previous to actual school work or
tter still, in conjunction with it, cannot fail to aid in this important
ty of the teacher. But far more important still is the help he may get
the proper adjustment of subject matter in the way of courses of study
d methods of presenting this subject matter. It is a work of vast re-
onsibility to make a course of study and he who undertakes it without
st knowing as fully as possible the general conditions of mind activity
d mind growth in those for whom it is devised is guilty of advising in
e most important matters without authoritative knowledge. The time
speedily coming when our courses of study in their main features will
directed by our wisest educators and it will be our purpose as nearly
possible to realize in *practice*, what they had in mind in *planning*.

I wish now to speak more especially of the pedagogical significance
the new psychology.

First. It has emphasized in a striking and convincing way the great
portance of school hygiene. It has shown that the mind is influenced
d conditioned by the bodily states far more than our educational plans
us far have considered. The teacher who has felt the force of these
uths thoroughly must feel that his duty is not done when he presents
e subject matter to the children under his care, but that he must know
at they are physically in a condition to receive it. Thus it happens
at the teacher who looks after the physical well-being of his pupils is
eparing the condition for *mental* hygiene, a subject in which the old
ychology took no interest, and as a consequence a phase of education
which the parents are as yet almost totally ignorant. They have been
d to believe that the bodies and minds of their children are wholly un-
lated things, and that the welfare of one has nothing to do with the

welfare of the other; that the anæmic, underfed or diseased child can learn as much and as easy, other things equal, as the healthy, normal child. The children and parents of the present generation must be thoroughly imbued with the fact that not only is there "no virtue in emaciation," but also, that there can be no mental wholeness in such a condition.

The teachers of this land ought now to be and must eventually become missionaries teaching the parents and the children the great lessons of good health. As long as we pay our physicians for curing our ills rather than preventing them, practical hygiene must come from another source.

Second. Experimental psychology has revealed in a way which introspection could never have done the influence of the internal elements in determining the results of sense perception. Since this fact can be exhibited in the laboratory in hundreds of ways, it is an easy thing to convince teachers in training of the great necessity of knowing what is in their pupils' minds before they can have just reasons for predicting what is to be the result of their instruction. In fact there is no need of definitely stating this important truth to those making the experiments, for in this way it will develop in their minds with greater force than in any other way. I feel free to say that in many cases a single experiment has brought my students to see and feel the force of certain facts of the mental life which they could not have understood from the reading of volumes of pure introspective results. A proper appreciation of the fact of apperception seems to me to be the best possible preparation for an intelligent observation of children, and consequently a necessary preparation for rational teaching. To this end some lines of experimental work which have received the greatest attention from the scientific side should be passed over hurriedly because the results have no special value from a pedagogical standpoint. And it should be remembered that these unimportant lines have been the ones most scoffed at. I know of no psychologist competent to teach children who has made much pedagogy out of reaction time, and yet perhaps most teachers slightly acquainted with the scope and purpose of experimental psychology have heard more about reaction times than all else. The study of reaction time is important, but not for pedagogy.

Third. Child-study is a branch of the new psychology, and it is now safe to say that no educational movement of the latter half of this century will finally result in so much good to the common schools as will this movement. Granted that much of the work now being done is desultory and misleading, the very fact that teachers are observing the children and striving to know more of their mental life, will inevitably induce better conceptions of the purpose of education, together with more rational ways of teaching. Besides the *direct* value of this work to the teacher, child-study is being taken up by thousands of parents, who are even now ready to say that such observation is helping them to a better appreciation of parental duties and a more rational care of their children. As Miss Wiltse says, "The study of a child, even mentally, or morally defective, throws a charm of interest about it and vastly increases the chances of doing that child good."

To know children is to love them, and not only the American school with its growing proportion of female teachers, but the American home with its decreasing children and lessening home-ties, and American girldom generally, with its fading ideals of domesticity, can only be affected favorably by anything that tends to draw it toward the highest object of human affection, the object most worthy of reverence, love and sacrifice, —the growing child.

Dr. Harris in emphasizing another phase of child-study, has said, "Child-study will perhaps find its most profitable field of investigation in the matter of arrested development. If it can tell the teacher how far to ish thoroughness to the borders of mechanical perfection, and where to op just before induration and arrest sets in, it will reform all our meth- ls of teaching. It can and will do this. The new psychology in its ro phases of direct physiological study of brain and nerves, and its ob- rvation of child development, will show us how to realize by education e ideals of the highest civilization."

Fourth. Physiological psychology has brought to light in a new and nvincing way the fact that ideals, which take possession of the minds children, immediately set to work the machinery of the whole organ- m to realize them.

Whoever has carefully observed a little child whose mind is filled ith some desire, has seen how its thought life is almost mirrored in its rresponding bodily adjustments. As the child thinks, so it acts, and as acts, so must it grow. Physiological psychology speaks with deep sig- ficance when it talks of the "motor power of ideas" and our peda- gy would be the richer could we but know the fullness of its import- ice.

The mind readers who travel about pretending some ocult power, now better than we that as a man thinketh, so will he tend to do.

If primary teachers, those who in a large measure direct and shape e early habits of children, could all feel that before the child should un- rtake to do, it should first know as fully as it is possible for it to know, hat it is to try to do, then would the motor life correspond more nearly that for which we seek. Then would the ideational process in the ind of the child, be the largest and surest factor in guiding the child ight. I fully recognize the importance of learning to do, by doing, d yet I want to say that very frequently better results in doing may be tained by knowing clearly what we are to try to do, before we begin do.

Let me illustrate : In teaching children to write it is far better and sier to suit the child's movements to his thought; that is to let the ovements required to make the letter grow out of, and be directed by s idea of the letter than it is to derive the thought or idea of the letter rough the movement. This makes the writing exercise in its incip- ncy an intellectual process accompanied by its natural and correspond- g movement, besides it prevents the greatest possible number of istakes and thereby insures an early habit, therefore a permanent andwriting.

Learn to do by doing has been and is a wise precept, but it seems to e that we might now say, learn to do by doing that which has first been nsciously and carefully planned.

But the ideal is still more potent in the moral life than in the physi- l. In fact, its potency in the physical becomes a condition for moral owth. In Hawthorne's beautiful story of the Great Stone Face, there worked out in detail this great pedagogical truth. Ernest's mind and art had so clearly seen and felt the purity of character portrayed in the reat Stone Face, that it was inevitable that he should unconsciously ow into a close and striking resemblance of it in early childhood, d had so unified his whole organic life that there could be no easy sep- ation between thought and action.

No such results could come from a *dreaming* of ideals. "Michael ngelo's head," says Emerson, "is full of masculine and gigantic figures gods walking, which make him *savage* until his furious chisel can ren- r them into marble."

The consciousness of this potency of ideals must of necessity drive us ore and more toward positive teaching and toward a constructive ped- gogy which will tell us what to do, rather than, what not to do. I some- mes feel that one of the chief sins of our lives, as teachers, arises from the fact that we teach facts as *finished results* rather than as living tools to mould and shape the child's life.

Finally, the spirit of experimental psychology is the spirit of progress. It seeks for truth in the most truthful way and wherever its influence is felt in pedagogy, it will be to make the teacher a student of his children, to the end that his life may count for most in the great problems of their education.

The discussion of this address was taken up as follows:

PROF. HOWISON:—I am glad to hear a paper upon the new psychology so fair to the old.

There is no new psychology. There is a psychology which is a part of metaphysics and a very important part of it. The study of mental phenomena is the study of this branch.

PROF. LATHROP:—This afternoon we heard of interest as opposed to will, method to theory, spiritual to natural. There is too much opposition here. Will consists to some degree in choice of motives. Will is best stimulated in the direction of interest. Teachers of English know that it is almost impossible to get children to write about things they are not interested in.

PROF. HOWISON:—We cannot teach unless the pupil is interested, but *interest* is not the supreme thing. You must awaken interest in the child who hasn't it, and teach him what he ought to be taught. The dispute is not between views, but upon views that try to make part equal to the whole.

PROF. GAYLEY:—In this young republic pupils should be taught that *duty* and not *desire* should lead; no matter how great a pupil's interest in his theme, the theme is worthless unless students have been trained to write. Students are now sent to the University from the public schools, unprepared to do the work in English. Unless there be something like compulsory training in Latin and Greek and other studies which give an idea of the history and the language of other times, students will never have the proper training for the University, in English literature.

PROF. LYSER:—A child's ideals of duty would not lead on to much education. The reason we do not have better results in education is because so little interest is taken by the child. We spend too much time preaching duty, and other abstract principles which cannot be driven, home to the pupil.

At the close of the discussion the President appointed the following members as a committee to prepare all business matters to come before the Association Friday afternoon, and also to act as a committee on resolutions:

JAMES A. FOSHAY, Los Angeles.
WASHINGTON WILSON, Chico.
JAS. A. BARR, Stockton.
J. B. HICKMAN, Monterey.
G. W. BEATTIE, Berkeley.

Thursday Evening.

A reception and concert was tendered the visiting teachers by the citizens and teachers of Oakland in the handsome High School building. Classical music was rendered exquisitely by the orchestra, and the utmost hospitality and pleasure prevailed.

SECOND DAY.

Friday Forenoon, January 3d, 1896.

THE ASSOCIATION WAS CALLED TO ORDER IN THE OAKLAND High School building, at 9 A. M., by President Earl Barnes. The Battle Hymn of the Republic was sung by the entire assemblage.

Charles H. Keyes of Pasadena, chairman of the committee on Manual Training, which was to present reports, was then called to the chair to take charge of the exercises of the forenoon.

Prof. Keyes briefly outlined the aims of the committee, appointed the year before, and papers upon various phases of investigation were read by Walter Kenyon, supervisor of Manual Training Department, Stockton Schools; Jas. E. Addicott, principal Manual Training Department, Normal School, San

Jose; Walter N. Bush, principal Polytechnic School, San Francisco; Chas. H. Keyes, president Throop Polytechnic Institute, Pasadena.

*Report of the Committee of California Council of Education on Manual Training.**

I. WHAT HAS BEEN DONE IN CALIFORNIA IN ELEMENTARY, SECONDARY AND SPECIAL SCHOOLS.

PROF. KENYON.

It would be useless to offer you a statement of what has been done in manual training in this State without first coming to an agreement as to the meaning of the term "manual training." The words convey only the idea of the training of the hand, without reference to mind and character. Thus, counterfeiters and safe-crackers, to be eminent in their callings, must be the product of considerable manual training, in its original sense. We could teach the alleged fundamentals, the "three r's," in a similar way, and in fact we often do. An expert forger always finds his schooling in the fundamentals of great value to him. This is true also of the successful bunco man. That is to say, our schools have imparted certain forms of knowledge to these pupils without troubling themselves with the question of character training. They have equipped the intellect with dangerous weapons without expanding the moral nature. In this connection Prof. Bailey recently said:

"The study of criminalogy shows the only effect of intellectual training to be to change the nature of crime. The culprit forges a check instead of stealing a loaf."

Then, to schoolmen, manual training must have an added meaning. We might consider it a training of the intellect through the hand, but this would have little meaning, for it is not possible to train the hand without, in some direction, training the intellect.

We come then to a third definition, which comprehends both the others and more. *Manual training is character culture through constructive activity.* It is in this meaning that manual training is justly a member of the course of study. If we hold fast to this thought we shall not again estimate manual training by the number of premature artisans it sends forth.

The accompanying table shows that, as a rule, the girls receive a kind of manual training differing from that given the boys. The former ive cooking and sewing, and in some instances wood carving, while e boys usually have bench work in wood. This division is worthy of tice, because it will help us determine the real difference between anual training and trade teaching. Cooking and sewing, under present nditions, are almost universal factors in the sphere of woman; and this stifies the training of girls in these subjects. It is not intended that ch training shall merely make cooks and seamstresses, but rather shall nd its peculiar service in the making of the universal woman. It need t even be presumed that she shall ever perform the service of cooking sewing. Having taught her these things as a portion of her typical uipment, we have only in that measure taught her to be a typical oman.

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*In addition to compiling the Reports the committee had collected and placed in the High School building, a comprehensive exhibit from the Manual Training Schools of the State.

This is not the case in teaching carpentry to the boy. The number of rpenters in the world is but a small per cent. of the number of men. here are also blacksmiths, bakers and accountants and jurists. It would quire a long list to enumerate all the vocations which may claim to be as early universal as carpentry. The formative school must not specialize these lines, nor in any line. How is it, then, that bench work in ood is so generally used as elementary manual training? Surely not cause it has somewhat the aspect of carpentry, but rather in spite of at fact. It is because wood-work is more easily adapted to the powers the pupil and the possibilities of the school than is any other handi-aft. In its intrinsic nature, it has a more direct educational value for e middle grades than most other forms of handwork. One effect of anual training is that it ennobles corporal labor in the pupil's estimate. his consideration, from a sociologic viewpoint, is a most important one. f course, wood-work does not stand alone in this regard. We have here quote Rousseau, that "it is not necessary to practice all trades in order honor them all. It suffices that we find none exceeded in dignity by r own."

Manual training is commonly believed to be something new. This far from the fact. Germany had at least one well rounded system of anual training some thirty years before George Washington was born. nce the time of the Reformation there have been few pedagogical wri-rs who have not given the subject direct and favorable attention. The story of manual training threads the history of pedagogy.

It would not be a difficult matter to show that manual training is the dest agent in the education of man. Nature, the earliest teacher, und it her almost exclusive device in evolving the creature who thinks, a time when there were no so-called culture studies, no books to con-y their text, no language to make books needful. That we at this day ay modify the agencies which evolved the early man, is to be admitted. hat we may abandon them utterly is to imply the assumption that heri-ge bequeaths the total accretion of race-growth. Man is of earth and ust ever return to earth for his recurring impetus.

Neither is manual training new in American schools. The typical ant of secondary grade finds its forerunner in Woodward's school at St. uis. Since the establishment of that institution in about 1872, nearly l the large cities of this country have equipped secondary schools on similar basis. California is in the forefront of this movement. The roop Polytechnic of Pasadena and the Lick School of San Francisco e typical, except as they exceed the type, in their thoroughly modern uipment and theory.

Elementary manual training, strangely enough, was nursed through infancy by that stronghold of conservatism, Boston. The daughter of gassiz, Mrs. Quincy Shaw, was its patron. To-day Boston's sloyd work an exceedingly strong feature of her elementary course. The move-ent has generally invested New England, and there is hardly a State rth of the Potomac and east of the Mississippi in which elementary anual training has not outgrown the experimental stage. The table will indicate that California is alive to the question, and cautiously availing herself of the experience of older States.

It is not the intention, in this report, to overlook clay modeling and drawing, as modes of manual training. That they do not appear in the table is only because they are in no such need of championship as the modes there considered. And wherever sloyd is mentioned, drawing is assumed.

Regarding bench work in wood, it is necessary to distinguish between two systems now in general use One is an American modification of the Swedish sloyd. The other the Russian system, likewise modified. In the Russian system the exercises for the most part are unapplied. That is to say, they are not embodied in finished models. The pupil performs any certain exercise for the sake of the tool skill acquired. At its completion he has no finished product remaining as the result of his labor. The sloyd, on the contrary, holds it to be desirable that the pupil's efforts shall have an appreciable outcome obvious to himself. Each exercise in the sloyd work, then, is embodied in some useful article. The younger the pupil the more essential becomes this obvious value of the product. So that the Swedish system, in its Americanized form, seems peculiarly adapted to the elementary school, while an extension of it would not be out of place in the high school. The Russian system, in which the pupil works with a self-calculating purpose as distinguished from the spontaneity of the earlier work, is most serviceable at a later stage.

These two systems are the basis of all the bench work in American schools. The sloyd is the usual form for the elementary school, and the Russian for the secondary.

Status of Manual Training in California, January 1, 1896.

ELEMENTARY SCHOOLS.*

City.	Kind.	Sex.	Grades.	Time weekly.	Pupils.	Cost.
San Francisco..	Woodwork Cooking Sewing	Boys Girls Girls	6th-9th	2 hrs.	?	?
Oakland ...	Bench work Wood carving Sewing	Boys Girls Girls	7th-9th	90 min.	150 136	$1,400 (outfit)
San Diego .	Cardboard sloyd Wood sloyd Sewing	Boys Boys Girls	5th 6th, 7th, 8th 3d-8th	70 min.	310 650	590 (outfit)
Santa Barbara....	Wood sloyd Cooking Sewing	Boys Girls Girls	6th-8th 8th 6th and 7th	2 hrs.	155 250 150	1,300 (outfit) 7,500 (building)
Stockton...	Wood sloyd	Boys	7th, 8th, 9th	90 min.	165	700 (outfit) 750 (building)
San Jose Normal ..	Paper and wood sloyd	Both	1st-8th normal	90 min.	150	500
Los Angel's Normal ..	Wood sloyd	Both	7th and 8th normal.....	3½ hrs.	300	800 (outfit)

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*Exclusive of drawing, color work and clay modeling. Many consider these of even greater importance than the later manual training. They are omitted from the table because they are very generally in use.

SECONDARY SCHOOLS.

School.	Scope.	Resource.	Cost.
Throop Polytechnic, Pasadena	Elementary Academic Normal	Endowed and tuition ($250,000)	$ 47,000 (manual training equipment) 50,000 (buildings) 13,000 (other equipment)
Lick School, S. F.	8th and high	Endowed ($540,000)	140,000
Polytechnic High, S. F.	High school	City System	5,000 (equipment) 15,000 (building)
Cogswell Polytechnic, S. F.		Endowed	
Wilmerding (to be located)		Endowed ($400,000)	

Two important facts are apparent from a perusal of the table. One is that there is a large field of usefulness for manual training prior to the secondary school; the other, that manual training for the elementary school is easily within the reach of every town having graded schools. We have been in the habit of looking upon manual training as an expensive luxury to be enjoyed only by endowed institutions and high schools supported by wealthy municipalities. In striking contrast to this supposition, the figures for the Stockton plant show an initial cost per pupil of considerably less than five dollars. I say an initial cost because, it must be remembered, after the present classes graduate from their benches, others will take their places without additional outlay except a nominal allowance for wear and tear. The figures in the case of San Diego are even more favorable than those of Stockton, although a further sum could be expended to advantage on either of these equipments.

Last fall a circular of inquiry regarding the status of manual training was sent to city superintendents of the coast. In reply, thirteen California superintendents expressed themselves as warmly in favor of its introduction and nine of them stated their respective boards of education favorably inclined. The common objection offered was that it was a hard year and expense must be avoided. It is probably true that these gentlemen, in every case, overestimated the needful cost of a manual training plant for the elementary school.

II. WHAT CAN BE DONE IN MANUAL TRAINING IN ELEMENTARY SCHOOLS.

PROF. ADDICOTT.

To-day we are within the borders of a new field of educational work. Many traditional ideas are disappearing as investigation presents to us a more liberal view of education. The physical activities of the child have not been utilized as they should be in the acquisition of knowledge.

The time has come when intelligent *manual* work is recognized to be as conducive to moral and intellectual development as the older plan of *book* study.

In this attempt to recommend a desirable and feasible course of Manual Training for Elementary Schools, your committee have taken into consideration the *educational* growth of Manual Training, the *artistic* culture it is taking on; its development as an auxiliary to Science, Language and Mathematics; the pedagogical principles underlying the subject; the average capability of the pupils in the different grades, from both psychological and experimental stand-points; also the cost of material and equipments.

Manual Training as treated in this report includes Clay-Modeling, Paper-Cutting, Color Study, Drawing, Sloyd and other lines of school work wherein the hand is a necessary factor in the acquisition of knowledge. The term includes very much more than a particular set of tool exercises; it is work, between which and other subjects of the curriculum a reciprocal relation should exist. The laboratory has long been an essential part of Physics; models and illustrations have greatly assisted the study of Mathematics; thus for many years Manual Training has been incidental by force of necessity, most teachers having adapted the methods, but few adopted them. Your committee recommend the adoption of specific Manual Training lessons in all the grades of the elementary and secondary schools. With advancing civilization comes a new environment; with a new environment come new necessities; with new necessities should come a course of study that will enable the pupil to adjust himself to his environment. Thus we believe the future life work of the pupils *should affect* the course of study; however, in elementary schools, we recommend the same course in Manual Training for *all* pupils without regard to *differences* in their prospective life work, believing a preparation for life work to be an important part of a good foundation for higher academic studies. When we consider that the elementary schools alone furnish the education for 95 per cent. of our boys and girls, does it not seem desirable to make the work of these grades of such a nature as will best prepare the 95 per cent. for life work? It seems more especially desirable when in so many instances such a modified course has prepared equally well the 5 per cent. for *higher academic* or for *special* work. Wherever *sincerely* tested, Manual Training has won an honorable place among the other great branches of study. The faculty of the State Normal School at San Jose recently passed the following resolution: "That in addition to the four great branches mentioned in the report of the Committee of Ten, we recommend a fifth branch now known as Manual Training and Drawing. We believe the Report of the Committee of Ten *inadequate* for the work of the elementary schools, as it gives the Natural Sciences an inferior place and ignores entirely Art Education and Manual Training. For a number of years Manual Training has been taught in each grade of the Normal Training School. Allow me to read a short selection from their last catalogue.

"Manual Training, from the *teacher's* stand-point, means teaching of things instead of names; it means investigation instead of reporting others' investigation; it means creation instead of mere imitation. It prepares the child for life work and not for examinations.

"As a means of leading the child to observe *accurately* it has no equal. In order to reproduce what he observes he must think. This power to see and think of what is seen cannot be overestimated; it is of incalculable benefit throughout all lines of school work. The time, therefore, that is given to this subject should not properly be called manual training time, if we think of it in its commonly accepted meaning. The child who models, or draws, or carves a leaf, a shell, or an animal, certainly learns far more than the mere hand skill required to produce the form. From the constant making, in various ways, of geometric forms, children cannot fail to get clear ideas of *number* and of *geometry*.

They read and spell better, because they have been and are being taught to see forms. In fact there is nothing in the school curriculum of more benefit to the stupid pupil, the careless pupil, the lazy pupil, the wide-awake pupil, or the naughty pupil, than manual training. It is restful, enjoyable, helpful. 'It has come to stay.' "

The question as what can be done in Manual Training by the teachers of the elementary schools is answered *specifically* by the accompanying program and the exhibits. Let us think of the question in a more *general* sense.

1. We can teach thoughts at the same time words are taught.
2. We can teach the great value of planning.
3. We can teach more *definitely* the relation of *theory* to practice.
4. We can cause the experiment to accompany the description.
5. We can substitute realities for symbols at an an earlier age.
6. We can show the errors of approximation, the truthfulness of exactness.
7. We can show more clearly the *relation* existing between Art and Manual Training.
8. We can help pupils in an intelligent choice of occupation.

To sum these all up, we can do more for the 95 per cent. who live by practical labor, without doing less for the 5 per cent.

Manual Training is not for one class of people, it is for all. It *must* be democratic if we hope to make it a means of any high degree of attainment and usefulness. Its strongest influence upon our people can best be secured by the introduction of "*manumental*" work in all the grades of the public schools.

We recommend no particular "system." The work of each grade, however, should be well planned, involving the best exercises of the various so-called "systems." Experience and educational research in connection with the growing power of the pupil should determine very largely the various steps in the work of any one grade. The whole course should be systematic and progressive. It is well to have each lesson applied to some object that may be of service in school or at home, provided progressive educational development is not sacrificed. Manual Training should have a "*reciprocal relation* to other subjects in the curriculum." Every exercise should be *artistic in form* and proportion. In the higher grades, working drawings should precede each exercise. Working drawings should be used below the sixth grade if the pupils are prepared to construct and comprehend them. The work of the sixth, seventh and eighth grades should include Sloyd, Joinery and making apparatus to illustrate principles of Mathematics and Physics. For this line of work benches equipped with the ordinary wood-working tools are necessary. Every pupil should be taught the care and use of tools. Where necessary benches cannot be secured, there should be at least *one bench* with a set of good tools, the class-work being done at the desk, protected by a "desk top;"* in such cases courses in Sloyd, carving and apparatus-making could be successfully taught, the principal tools being knife, scroll-saw and chisel.

Boys and girls should do the same line of work up to the beginning of the seventh grade. In the seventh and eighth grades the girls might have a choice of sewing, decorating and modeling, while the boys continued with Sloyd, etc. Instruction in cooking would fit in very well here. Cooking has long been considered a domestic art; it promises to be a science, and as such it should be taught in connection with Physiology and Hygiene.

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*The "desk top" sold by Chandler & Barbar, 15 and 17 Eliot street, Boston, contains drawing instruments, "laying out tools," Sloyd, knife, etc., and may be clamped to the ordinary school desk as a protection, while the student is using wood-working tools.

For the intermediate grades, card-board and thin wood Sloyd should be introduced as a preparation for the more difficult Sloyd of the higher grades, drawing with straight edge and compasses being a specialty in the intermediate grades.

In the primary grades clay modeling, coloring, paper folding, etc., should be taught in relation to number and science work. Conceptional drawing should be a special feature of the primary grades.

The following program represents the best efforts of your committee in outlining the work for each grade. We hope it may possess such leavening qualities that will eventually solve the problem more satisfactorily:

MANUAL TRAINING PROGRAM FOR ELEMENTARY SCHOOLS.

FIRST YEAR.

Drawing—To cultivate powers of observation. No definite lessons.

Color—To teach standard colors. No definite lessons.

Sewing—Hemming, Backstitching, Felling, etc.

Clay Modeling—A few type forms; as sphere, cube, familiar objects.

Block, Tablet, Stick and Ring Laying—To teach number work, symmetry, and erection, etc.

Paper Cutting and Paper Folding—To teach form, number and standard colors.

SECOND YEAR.

Drawing—Conceptional, in connection with science studies.

Color—Tints and shades, use of brush, fruits and flowers painted.

Sewing.

Cardboard Work—Two dimensions only.

Block, Tablet, Stick and Ring Laying.

Paper Folding.

Paper Cutting.

THIRD YEAR.

Drawing—Shrubs and flowers. Conceptional (aid to science). Constructive (aid to Manual Training).

Color studied analytically.

Sewing.

Cardboard Sloyd (three dimensions).

Clay Modeling — Difficult type forms. Fruits, leaves, etc.

Tablet and Stick Laying.

Paper Folding—Geometrical.

Paper Cutting—Geometrical.

FOURTH YEAR.

Drawing—Straight edge and compasses. Designs for Sloyd.

Sand Modeling (aid to Geography).

Collecting seeds, woods, plants and other specimens. Preservation of specimens.

Gardening—Germination of seeds and growth of plants.

Thin wood Sloyd.

FIFTH YEAR.

Drawing—Principles of correct drawing. Constructive use of instruments. Conceptional.

Sand Modeling (aid to Geography).

Cardboard constructions.

Sloyd, thin wood, geometrical forms.

Knife work (Kilbon's).

SIXTH YEAR.

Drawing—Conceptional (mechanical objects). Plans for Sloyd, scale, use of compasses, set square, ruler and chisel-pointed pencil.

TOOL WORK.

Desk (desk top) — Use of rule, gauge, try-square, knife and bracket-saw. *Sloyd* (cardboard and thin wood). *Knife work* (Kilbon's).

Bench (full set of wood-working tools)—*Sloyd* (Larsson's).

SEVENTH YEAR.

Drawing—Freehand and Prospective. Designs for Sloyd and Joinery.

Water Coloring—Definite lessons.

Sewing.

TOOL WORK.

Desk—Cardboard (useful articles). *Knife work* (Kilbon's), Boys.

Bench—Sloyd (Larsson's). *Joinery* (Boys).

EIGHTH YEAR.

Drawing—Designs for Carving and Sloyd. Designing. Freehand.

Clay Modeling.

TOOL WORK.

Desk — Sloyd. Carving. School Apparatus (Boys). *Clay Modeling and Household Decoration* (Girls).

Bench—Sloyd. Carving. School Apparatus (Boys). *Household Decoration and Clay Modeling* (Girls).

BOOKS FOR TEACHERS OF MANUAL TRAINING IN THE ELEMENTARY SCHOOLS.

W. W. Speer's "Lessons on Form." Payot, Upham & Co., 401 Battery street, San Francisco.

Hailman's "Primary Methods."

"A Handbook for the Sewing School Teacher." Thomas Whittaker 2 and 3 Bible House, New York.

"Color in the Schoolroom." Milton, Bradley & Co., Springfield, Mass.

"Paper and Scissors in the Schoolroom." Milton, Bradley & Co.

Kilbon's "Knife Work in the Schoolroom." Milton, Bradley & Co.

Working Drawings of Models in Sloyd (Larsson's). E. L. Kellogg & Co., 61 East Ninth street, New York.

CONCLUSION.

Any earnest student of the times must see the necessity for wider knowlege, for a more varied education, for a stronger self-reliance, and for a far greater power of self-help and determination than have been given by old methods of education. The inhabitants of the civilized world are increasing rapidly; competition is becoming keener and closer. There is a demand for an education that not only gives scholarship, but prepares for citizenship in relation to life work. We have had much trouble because of workers who will not think: we may have more serious difficulty with the thinkers who will not work.

It is a good thing to be a scholar. It is a better thing to be a scholar who works. It is a good thing to be a worker. It is a better thing to be a worker who thinks.

The worker should be enough a scholar to respect the scholar; the scholar should be enough a worker to respect the worker. The dignity of intelligent handwork should be appreciated by parents and teachers. We believe Manual Training in the elementary schools will largely accomplish this end. If the teachers of this great Republic refuse to acknowledge industry as honorable and praiseworthy, and continue to idealize scholarship as the only attribute of mankind worth striving for, we may never hope for that sympathy, that respect, that good fellowship and brotherly love which should characterize American citizens.

III. COURSES FEASIBLE AND DESIRABLE FOR SECONDARY SCHOOLS IN MANUAL TRAINING.

PROF. BUSH.

It is not the purpose of this division of the report to set forth in detail the many arguments in favor of manual training as a legitimate and essential part of a public school system of education. Educators of high standing have given for years the cause of manual training careful study. Eliot of Harvard, Walker of Boston, Woodward of St. Louis, and scores of others, have recognized the merits of its claim to a rank equal to that of the older and acknowledged essentials of a common school course of study.

The basic principles of manual training were summarized many years ago by Prof. W. Smith, for many years State Director of Mechanical Arts in Massachusetts. In a paper read before a State Convention in 1879, he states that a healthy condition of the industrial occupations is absolutely necessary to the success of all other occupations, and that the school is the medium through which the human skill necessary to control the forces of Nature is to be acquired. Since the days of '79 the aims and purposes of manual work have been closely studied, industrial courses have been classified, the distinction between manual training and trade or special schools has been sharply defined, and we have come as teachers to look at manual work not from the standpoint of Professor Smith and other pioneers, but from a point of view that is purely educational. To us the chief value of manual training is its educational value, a value which depends upon the method of teaching adopted, upon the care with which the pupil is taught to observe, and the logical accuracy with which he is trained to reason upon the observations he has made.

The number of secondary manual training schools, public and private, throughout the Eastern, Western and Southern States is already large and rapidly increasing. Between the years 1883 and 1886 manual training high schools were established in Baltimore, Chicago, Eau Claire, Toledo, New York City, Omaha, Denver, Cleveland and New Orleans. Since then similar schools have been established in Boston, Minneapolis, Milwaukee, Louisville, Cambridge, Fall River and many other Eastern cities. Superintendent Lane of Chicago, in his report of November, 1895, to the City Board of Education, announces that ten manual training departments will be added to those already in operation in as many grammar schools in that city, that for the year 1896 over $30,000 has been set aside for the development of manual training in Chicago, that the increase in enrollment in the Chicago manual training high schools over that of the preceding year was 121, and that the quarters of the school were so crowded that outside rooms had to be secured. In the same month a committee on English high and manual training work recommended that manual training be made a regular part of the course of study. In Minneapolis the entire high school enrollment in 1890 was 1659; in 1895, after the opening of the Manual Training High School, the enrollment had increased to 2565. Similar reports have been made from a large number of Eastern cities. All tell the same story of quick public appreciation, rapid and healthy development. In 1892, in response to questions addressed to the principals of wenty-seven public and quasi-public manual training secondary schools, t was learned that in no instance had the work of the shops and drawng-rooms interfered with that of the academic branches, and in all cases here the period of manual training was sufficiently long to furnish the ecessary data it was the opinion of principals that the character of the ork in Natural Science and Mathematics had improved.

California's attitude thus far towards manual training is not consisent with her reputation for easily adapting herself to progressive and ew conditions. President Eliot, in his recent visit to California, called ttention to the fact that the commendable progress our secondary chools had made in modern educational work was due to the fact that n this comparatively new State, the schools were untrammeled by tradiions and could adopt and carry into execution courses of study that in he older and ultra-conservative Eastern States were quite impossible. ur educators have been as a body behind their Eastern fellows in comrehending the value of the educational idea involved in manual trainng. It is a significant fact that in a series of articles on our public chools, published in the Christmas number of one of our leading dailies, nd written by our County Superintendents, only one referred to the ubject of manual training, and in this article wood-work was called carentering and designated as a fad. As compared with cities of the East nd South, we have done little to secure the introduction of manual raining in our secondary schools.

Previous speakers have dwelt upon the history and the present conition of manual training in the elementary schools, and made recomendations as to the courses of study desirable and feasible for such chools. It is within the domain of this article to make recommendaions for similar courses for secondary schools. While it is desirable hat every boy should have an opportunity to be brought in touch with he industrial world, the committee does not deem it feasible for two reaons to recommend such a course for country high schools: First, beause country schools can not meet the necessary expense of such a ourse; second, because the farmer's boy receives many of the practical enefits of a course in manual training in the ordinary routine of farm ife. It is believed, however, that every city of 15,000 inhabitants and ver should establish a manual training high school.

It is useless to deny that such schools cost money. The need of indiidual instruction on the part of the pupil calls for a comparatively arge number of teachers. The diversity of exercises to which pupils are ssigned in the progressive work of a three years' course involves the se of many kinds of tools and machines. The necessary investment, owever, is not as great as might at first sight appear. It has been emonstrated in the San Francisco public high school that a complete quipment for drawing-rooms, wood-working, wood-turning and patternaking shops, forging-room, machine shop with gas engine, shafting, ulleys, and erection of machines can be purchased for about $8,000, the quipment being sufficient to meet the needs of a school of one hundred nd fifty boys in three classes—Junior, Middle and Senior—of fifty each. he additional expense necessary for furnishing apparatus for classes for oung women, in clay modeling, wood-carving, free-hand drawing and ewing is trifling. In this estimate the cost of building is not included. n the smaller cities, where land is cheap, the committee would recomend that a one-story wooden building be utilized for manual training urposes. To avoid patch work and delays, harmful to the pupil in ompleting a symmetrical course of study, it recommends that a comlete outfit for wood and iron work be secured at the beginning. Boards f Education in California change their membership as a rule every two ears. Out-going Boards of Education have a financial record to make. n-coming Boards do not at first see the value of manual training. If, owever, at an expenditure of $8,000, a complete equipment can be ecured, it is an easy matter to arrange a series of object lessons which bring conviction to the mind of every reasonable man that this investment is wise and profitable.

The report has emphasized the cost of equipment because it is the *sine qua non* of a secondary manual training course. If the equipment is secured, although it cannot be said that even to-day the problem of the proper correlation of manual training with other branches has been satisfactorily solved, nevertheless, the details of a working course of study are easily arranged. As a rule, the school session of the manual training institutions of the country covers a period of at least six hours daily, and if there is not sufficient time during the regular hours to cover the exercises of the day, pupils are ready to remain after the close of school. Of the thirty hours per week of school session eight, at least, are devoted to shop-work, four to drawing, five to laboratory work and the remainder to English, Modern Language and Mathematics.

On account of the expense involved the committee does not deem it feasible to recommend the establishment of independent manual training high schools. It is of prime importance, however, where the course in manual training is added to existing courses that it should be recognized as their equal in rank, that it should be assigned its place with and not after them, and that it should have the hearty sympathy and support not only of the teachers and principal, but of the officials of the school department. In a combination of this character but three new teachers are needed—one for mechanical and free-hand drawing, one for wood and iron work and one for clay modeling and drawing.

IV. THE TEACHER OF MANUAL TRAINING.

PROF. KEYES.

Manual training in our public schools is to be justified only on educational grounds. Its object is the development of power which is general in its application, and its aim is never the production of the tradesman.

The teacher demanded for this service should be first of all a teacher and not an artisan or an engineer. His specialty should be first of all, *education*, and not some branch of mechanical art.

To be a teacher is to possess such moral, physical and intellectual health that all one's contacts with youth make for uplift. To be a teacher is to possess such culture and power as shall inspire the young to desire strength and culture for themselves. To be a teacher is to possess such mastery of the subjects of instruction, such art in imparting knowledge as to make certain that youth shall transform that knowledge to the wisdom which alone is power. To be a teacher is to know books well, and boys better.

But to be a manual training teacher who shall truly advance the cause of industrial education, is to be all this and something more. To the equipment for general instruction must be added technical art, mastery of the tools, processes, and materials, through contact with which shall be developed conscious, skillful energy, through experience with which every other faculty shall be reduced to the dominance of the will.

The manual training teacher, too, needs rather more of general culture than does the teacher of the grammar school or the high school. This is necessary for the removal of the impression which is to-day the chief hindrance to the general introduction of manual training into our scheme of popular education. There is a popular impression that manual training is teaching boys carpentry, blacksmithing, etc., that this work must be done by men who are simply carpenters and blacksmiths, that such men are usually comparatively illiterate, that their contacts do not, accordingly, make for the refinements of higher living. There is a belief that a man who has education, art, and culture enough to teach anything else, would not teach tool work. The boy goes to his first meeting with his teacher of English, mathematics, or history, expecting a man of some culture; he is disappointed if he finds it not. On the other hand, he goes to the Sloyd room, forging room or turning room, expecting to meet a man of limited education and little culture ; he is surprised if he finds there a cultured, scholarly gentleman. When such surprises become the rule there will be no opposition to manual training, and the public will recognize manual training teachers as belonging to the very highest ranks of our profession. The desire for their services will simply be the desire for the best in education. We have all known that the only way to improve education and elevate teaching is to improve and elevate the teacher. The only way friends of manual training can so improve and elevate that work, as to make it sought for by the best people in every community, is to labor for the improvement and elevation of the manual training teacher, with especial emphasis on the *man* and the *training*.

The manual training teacher, too, needs rather more of the teaching art and the philosophic training which alone can give the power to study human development accurately, because his must, in the nature of things, be largely individual work. He is compelled to address himself to the true problem. He needs to know tools well, books better and boys best.

At this juncture it becomes necessary to notice the present sources of supply for manual training teachers. At the outset we are confronted with the fact that there are but five institutions in America that offer courses for the special and professional preparation of manual training teachers, and in at least three of these no adequate literary or academic requisition for admission is made. Fortunately, the classes have, therefore, been small and there is an evident tendency to require for graduation as manual training teachers in the future as generous professional training and at least as much academic training as is required for graduation from the full courses of the best normal schools. Omitting, then, these schools which as yet furnish but a meagre proportion of the whole number of manual training teachers, we find but two sources of supply—the technical college and the manual training schools themselves. The former give a training involving less of culture than a college course, but representing, perhaps, almost an equivalent in power. Their graduates like those of other colleges are about as well prepared to successfully practice law or medicine or preach the gospel as to teach. They can learn to teach by teaching, but even in this work of getting one's professional training by practicing on innocent classes of youth, they are seriously handicapped by the fact that the point of view of the technical school is totally different from that of the training school. The aim of the former is strictly economic and that of the latter a strictly educational one. The former looks at the joint, the model, the piece of work ; the latter at the boy and the reflex influence of the exercise upon him. The standard of excellence for the technical school is perfection of the wood or metal model and that attained in the shortest possible time. The experienced manual training school teacher on the other hand knows that many a mechanically perfect model expeditiously turned out, means less development, less training than some imperfect ones upon which much more time may have been spent. The character and sequence of exercises and models is entirely changed in the training school. In the technical college the exercises seek the quickest possible mastery of the tools, machines and processes. In the training school the model must furnish incentive and mental development. The young graduate of the technical college must then, when he enters the manual training school as a teacher, totally abandon the aims and methods of his alma mater. To make himself the needed teacher of manual training he should proceed to supplement his general training by a systematic study of physiological psychology, history of education, and methods of teaching. This will enable him to develop principles which will determine for him correct practice. Without this study he must simply teach by authority, adopting the methods of others, or teaching as he himself was taught.

The graduates of the manual training high schools who, in turn, take places as teachers in such schools, labor under an additional disadvantage. They are not only without professional training for the work of teaching, but have had from three to four years less academic culture than the graduates of technical colleges. The line of study necessary to make a professional teacher out of a technical school graduate must, for the manual training school graduates, be strongly reinforced to make up for lack of general education. He possesses one definite advantage over the technical school graduate in that he already has the method of the training school.

With all these limitations upon special preparation of manual train-school teachers we have, nevertheless, a large proportion of skilled instructors who have through private study as above indicated come to be artists in their profession. These are reinforced in number by those who have had the training of normal school and college and who, after years of experience, have taken special courses to gain technical skill.

For the future some things seem definitely settled. First the teacher of elementary manual training must be also available as the teacher of the common school. For the mass of scholars no special teacher of manual training will be possible. This being the case, the institutions which provide us with the great body of trained teachers for the district school; to-wit: our normal schools, should provide instruction in elementary manual training. This should include at least work in Sloyd, free-hand drawing, clay modeling and wood carving.

The special teachers and supervisors of manual training in other elementary, secondary and normal schools must get their training in specialized institutions. These institutions should furnish opportunity for the comparative study of the various forms of manual training. This is necessary to prevent narrowness. The teacher whose only contact is with the so-called Russian manual training is sure to be known by the flippancy with which he disposes of all other systems and the cynicism with which he refers to Sloyd as an infantile indulgence in whittling and sandpapering small blocks. The teacher whose only experience has been with the Swedish system is apt to think of wood Sloyd as the only valuable educational manual training yet developed.

He is sure that the modified Russian system so commonly in use in American Manual Training High Schools is all wrong. All this is obviated when the training institution offers the aspiring manual training teacher as his daily educational clinic successfully operated classes in the various forms of elementary and secondary manual training. If these can be contrasted with the workings of the technical institute, so much the better. Such opportunity for the preparation of teachers must be provided before the best manual training will come to be a common thing. Then we will cease to have illiterate manual teachers. Their lack of ordinary culture and scholarship will be as intolerable in a teacher of cooking or sewing, or drawing or forging, as in a teacher of history or science or literature. Their lack of professional training will be as impossible in the teacher in charge of wood shop, machine shop or carving room, as in the physician or the lawyer.

Until the coming of this, day-schools and committees seeking manual training teachers should insist that none but teachers in the truest sense of the word shall be admitted to the manual training rooms. We must remember that no matter what the subject of instruction, the teacher is but giving to his pupils the best that is in himself. No matter how infinite the literature or how profound the science, we are simply giving our best selves to the youth who come in contact with us. The humbler the medium of that giving the more the necessity for the greatness of the gift. The teacher of forging or Sloyd needs more to be good and great and wise than does the teacher of history. He need not fear the magnifying of his calling, he cannot have too much respect for himself or for the teaching art.

And finally, let it be noted that for the inauguration of work in manual training, teachers of special skill and wisdom are demanded. On the results of the effort of the first year in a single community may depend the fate of manual training for a whole county or for the State. It is highly important, therefore, that new movements in manual training shall be under the immediate direction of masters.

C. H. KEYES,
WALTER KENYON,
J. E. ADDICOTT,
P. W. SEARCH,
WALTER BUSH,
EARL BARNES,
S. T. BLACK,
Committee.

The foregoing papers were discussed as follows:

PROF. CRAWFORD, Oakland:—Fourteen years ago we made a beginning in manual training in the Lincoln School in Oakland, the first experiment of the kind in California.

Statistics show that 8000 laborers come from the old world annually and find places here. These places are waiting, but American boys are not ready to take them. If our boys will not work, they will find places behind walls and bars.

Manual training is valuable, not for the sake of culture of the individual, only, but as a help for bread-earning for the poor man.

PROF. LYSER, San Francisco:—In 1878 in San Francisco I read a paper, advocating the teaching of manual training in every school in the State. I wasn't old fogy then, and I am not now, but I am not in favor now of introducing manual training into the public schools. I believe in manual training in schools purposely prepared for it, not in schools already full. Manual training is good, but it is not the business of our schools to furnish it. The school is not the only educational factor. Parents must share some of the responsibilities.

PROF. BROWN, Berkeley:—If manual training is to have a place in the course of study, it must be shown that it is not something added, but an organic part of education.

One of the marked characteristics of psychology is that it recognizes the motor side of mental activity. Psychologists should ask what is the necessary relation of manual training toward making a perfect fabric of mind.

Prof. Randolph, Amador:—The purpose of education is the development of higher life. The Universe is a museum for the instruction of every human being. Man should learn how to control the Universe by machinery and take more time to intellectual advancement.

The schools should make not only good citizens, but good men; should give pupils a chance to grow to the full stature of men. We have been educating the eye and ear, but not the hand, which is only another factor for getting at the inner man. For the education of the hand something like manual training is needed.

Prof. McChesney, Oakland:—I deprecate that argument for manual training which considers it only a means for livelihood. We are teaching to make good citizens. What is a good citizen? A good citizen is a man who is honest and intelligent also. Will manual training help to make an honest man? I am convinced that manual training, properly taught, will help to make a more honest and intelligent man.

Miss Adams, Mayfield:—There is not a subject in the course of study but is helped by manual training. In the first year in my school I took the liberty of ignoring the formal arithmetic work and putting clay modeling and paper work instead, and by working with this material, and saying nothing about arithmetic, the children learned incidentally all that was laid out for the first year's work in arithmetic.

Supt. Linscott, Santa Cruz:—Let us not cry fad, but, as teachers, give a year's trial to see if manual training has any place in our schools. How many know what manual training means as these gentlemen define it? I trust the teaching force will think of this question, and then preach it not as a question of dollars and cents, but of souls.

Mrs. Howard, Oakland:—From the social standpoint we need to know how to apply the knowlege we now hold. We want not only honest people, but useful people. We want a strong public opinion to strengthen the hands of the teachers.

Supt. Wood, Monterey:—Many do not see the necessity and the possibilities of manual training. It is pitiful to see how few of our boys, especially in towns, have learned to work. Nearly all our great men have been country boys. Why? They have the habit of work.

Mr. Lynch, Centerville:—We have fitted up desks for manual training. Is it more illegal to have saws and hammers than to have spiders in bottles?

Miss Dean, San Francisco:—If a boy sees a motive he learns. Anything that gives the child control over himself is worth studying. Can manual training be presented with this motive?

Prof. Barnes, Palo Alto:—I am devoted to manual training in its larger sense. The best education has come from contact with nature. It is absurd to say that Abraham Lincoln was uneducated because he did not have the advantages of the schools. He was educated for the work of his life, even if most of his clay work was done with a hoe, his woodwork with an ax, his physics with a crowbar. A face to face struggle with nature has given the best men of the country to-day. Manual training seems to promise to give man this practical contact which his ancestors got on the farm, in ships, or in the woods. The adjustment of the manual training question will come. We must keep our eyes open, and welcome truth, and find the way.

Prof. Pierce, Los Angeles:—We say the kindergarten is a good thing, yet drop its manual training idea in the higher grades. How many tramps to-day know how to work? Work may be taught at home, but not systematically. There would be fewer drunkards and dyspeptics to-day, if girls were taught scientifically and systematically how to cook.

Supt. Babcock, San Francisco:—If I had had less of manual training when a boy and more of instruction that would have taught me to think, I should thank God for it. What I find most practical to me of my attainments, is the ability to apply myself to what is before me. If the teachers see that children learn how to apply themselves to every task that comes, they will do well.

Prof. Keyes, Pasadena:—I have made it a boast that I have no faith in parentalism, in government, and I want to stand by manual training to fight parentalism.

The old education made every man a preacher, a lawyer, a doctor; the new education makes him also an electrician, an engineer. It might spoil a boy to make him of the first class when he belonged by aptitude to the second.

Every opponent to-day has spoken against *trade* education, not against manual training proper. Manual training will equip a boy better for college, when combined with his high-school studies, than he can be equipped when his entire time is given to academic work.

There are ten specially trained teachers for the manual course now, where there was only one formerly. We raised our tuition at the Throop Institute from $60 to $100 to keep out pupils. More pupils are complained of for overwork than for shirking. This answers the question of interest.

We must beware of confusing manual training with the teaching of trades. This report does not need justification. I move that it be accepted and referred to the Committee on Resolutions to report.

The motion was adopted.

Friday Afternoon.

The Association was called to order at 1:30 P. M. President Barnes in the chair.

The first order of business was the election of officers. The following were elected:

President,
J. W. Linscott, Santa Cruz.

Vice-Presidents,
F. N. Miller, San Diego. Frances A. Dean, San Francisco.

Secretary,
Anna C. Murphy, Sacramento.

Assistant Secretary,
W. F. Hall, Oakland.

R. R. Secretary,
J. W. McClymonds, Oakland.

Treasurer,
Bessie G. Haslam, Santa Cruz.

The choice of a meeting place for the next gathering of the Association was then taken up. San Jose, San Francisco, Oakland and Sacramento were put in nomination. No place having received a majority of the votes the nominations of Sacramento, Oakland and San Francisco were withdrawn, and San Jose was declared the next meeting place.

The remainder of the afternoon was occupied by papers read by the following persons and discussions thereon: Superintendent T. J. Kirk, Fresno; Preston W. Search, ex-Superintendent Los Angeles City Schools; Thomas P. Bailey, Jr., Berkeley University.

SOME THOUGHTS ON SCHOOL SUPERVISION.

SUPT. KIRK.

School supervision is probably more comprehensive than any other educational theme can that be discussed, for with efficient supervision, proficiently applied, all other school questions would take care of themselves and an educational millenium might be claimed to be right at hand.

That school administration naturally and plainly consists of two distinct departments—the business department, and the department which supervises the instruction—there can be no question, but is there not a question whether President Draper be correct in intimating that the duties in each of these departments are expected to be performed by separate and distinct authorities? Is he correct in claiming that the business affairs of a school system may be well managed by any citizen of common honesty, correct purpose and business experience? These alone?

Is not the ideal system, rather, that in which these two departments are considered as being closely related at every point and as needing such supervision as will recognize the due importance of both without partiality for either? In other words, ought not State, county and city superintendents to be educational experts as well as men of business experience and sagacity?

It is interesting to trace the history of school supervision in the different States. It is much alike in all. A State educational officer, variously designated commissioner, inspector, director, superintendent, was early provided for, but county and city superintendencies are offices of comparatively recent creation. The first city superintendent was chosen in Providence, Rhode Island, in 1840. Boston followed in 1850. County superintendency, it is safe to say, is not more than thirty years old in a majority of the States, and in not a few it has been provided for within the last fifteen or twenty years. Some are just now introducing county supervision.

At first these offices were more nominal than real. These officials were little more than mere disbursing officers. The duties prescribed for them looked mainly to a careful accounting and a faithful application of school funds. To visit schools, inspect and direct the instruction, were rarely or never intimated. The offices were held in connection with those of other State or county officials. The office of State Superintendent was in many instances in connection with that of Secretary of State, and in one or two States with that of the Governor. That of county superintendent was held in connection with that of county clerk, county judge, county auditor, and sometimes with that of county coroner. Several of the counties of California, until recently, had some of these combinations.

The advancement of educational matters is perhaps nowhere more plainly shown than in the greater importance, larger powers and increased responsibilities and duties which have been imposed upon these officials. State Superintendents are practically now the school law-givers in their respective States. Their opinions and decisions are duly respected and have all the force of law until otherwise determined by a court of competent jurisdiction. And, at the present time, a man more of all-work and of every calling cannot be conceived than that which the office of county superintendent demands; especially is this true in the case of the office of county superintendent in the State of California. He is called upon to perform the duties of teacher, financier, lawyer, judge, architect, arbiter, etc. He must have some knowledge of all things, and he is expected to be a specialist in many things. In him the qualifications of the scholar, the business man and the professional man are supposed to be combined in due proportions and to be exercised with just correspondence on all needed occasions. The more proficient in each and all of these requirements the better equipped is he for the demands of the position. How few among our numbers approach the full measure of these requirements. It is unreasonable to expect any to be so generally and so abundantly equipped, but the ideal superintendent may readily be conceived.

Public schools in America began with the district system, and it was Horace Mann who pronounced it the most disastrous feature in the whole history of educational legislation. Where it obtained, years will still be required to eradicate its evil effects.

In the earlier years each individual school was a law unto itself. Cities, even, were divided into independent school districts and were controlled by local committees. Schools were efficient or neglected, according to district management. Unity of effort was out of the question. Co-operation, correlation, concentration, or any sort of combination was not dreamed of in the school days of our fathers. In all, or nearly all, of the States, at first, excepting California, the entire revenue for the support of schools was raised by district taxation, or by local rate-bill subscription.

This system, in whole or in part, still prevails in many of the States, impeding the progress of an educational system.

The district system means inequality in the provisions for general education. It thwarts the fundamental purpose of the State in designing education for *all* of its children. Poor schools where good schools are most needed are invariably the results. The progressive communities provide for and maintain good schools, but those communities which are poor and indifferent to education will have poor and indifferent schools.

Those who have lived in the States east of the Rockies know what contrasts often exist between schools in the same county, in the same township. The contrast was more strongly marked between the city schools and the schools in the towns, villages, and in the contiguous country districts.

The city of Peoria, Illinois, which for a few years was my home, is situated in the county of Peoria. About twenty years ago it had a population of 30,000, the entire county of Peoria a population of about 60,000. The city even at that time, was famous for its well-supervised schools, its commodious and well-furnished school buildings, its annual school term of ten months. But on a visit to the small towns, villages and country school districts, in the county outside of the city, where half the county's population lived, one would see the scantily provided school house, the poorly paid school-teacher, the three to five months annual school term. The children outside of that city, as well as those inside of it, belonged to the county of Peoria, to the great State of Illinois. The explanation is that under the district system which prevailed at that time, the city of Peoria, in which was concentrated the wealth of Peoria county, was not made to contribute to the support of the weak country districts contiguous to it, and the great city of Chicago, a hundred miles away, sustained no more educational relation to those country districts than did the city of Montreal in a foreign country. The contrast was perhaps for years more strongly marked between the schools of Boston and those of the country districts near that city. Since that date there has been important educational legislation in Illinois and Massachusetts, and those States to-day, to a greatly increased extent, are enjoying the benefits of a State school system; a liberal general State tax is now annually imposed for the support of their public schools.

"Individuality, community pride, localized effort are essential to success," but a school system which connects the weaker schools with the stronger ones, which centralizes the authority of management, is a system which promotes the interest of all without hindrance to any.

The founders of the school system of California were men who knew from experience the defects of the district system and succeeded in establishing here a State system, with provision for State school taxation, State supervision, and provision for subordinate yet, in a sense, co-ordinate county and city supervision.

This leads me to suggest that we who are to-day aiding in directing the educational Ship of State, might do well to take our bearings and consider whither we are sailing. Are there any signs of our heading toward the shoals of the district system? Are we maintaining that bond which in strength should hold together the weakest country district and the most efficient city school in a common union?

Those who are familiar with the educational history of California, remember well the anxiety that was felt by the friends of our State school system in 1879, the time of the adoption of the New Constitution. It was then feared, and it may be that those fears were well founded, that, taking away the powers of the State Board of Education and localizing more the management of public schools was a step backward. It may be, and perhaps is a fact, that our educational advancement during the past decade has been, in spite of this change, rather than any advantage given by it. Certain it is, that in the matter of uniformity so much desired in requirement for teachers' certificates it was a backward step, and an early return to the former method, or something like it, should be sought in a Constitutional amendment. Either through additional power to be vested in the State Board, or by a common move on the part of all county and city Boards of Education, a more uniform course of study should be adopted. With the course suggested by the Committee of Fifteen for primary and grammar grades, which course is generally so well received, there should be little trouble in coming to an agreement on this matter.

Are there any tendencies in the administration of our schools toward such a condition as instanced in the case of Peoria twenty or thirty years ago? Are there any indications that our larger cities are becoming in a degree selfish and forgetful of the fact that they are a part of our State educational system? Do they, in their local pride and material independence, sometimes cease to remember that they are connected in the cause of public education with the smaller cities, towns, villages and country districts?

The answer might be, that so long as the present State law for a general State school tax remains, there is no need of concern about this matter. But experience has shown that a law may sometimes become a dead letter. If the State school system be right; if that for which Horace Mann and other great educational lights labored so arduously to secure be correct, right and just; if the general purpose of public schools be for the training and the education of *all* the children of the State, then the school advantages for the smaller and weaker communities should be as nearly co equal with those of stronger and wealthier communities as different conditions will admit. The differences should be based upon the special provisions necessary in caring for a greater aggregation of children. There are at present in the State of California 323,000 school-census children. Of these the nine largest cities have a little more than one-third, or 119,000. The other two-thirds—or 214,000—are found in the smaller cities, towns and country school districts; and yet, at educational gatherings, and too frequently in the halls of legislation, school matters are discussed and legislated upon as though there were no parties in interest excepting cities having Boards of Education and City Superintendents. In consequence, may not the common school law contain the words, " Except in cities having Boards of Education" a little oftener than really necessary.

It is admitted, and the statement is worthy of repetition, that success depends largely on local pride, individual, personal, localized effort. Who among us is not delighted to see the march of progress which our cities are making? Visiting educators from other parts of the State rejoice in being here on this occasion to behold these newly constructed, magnificent and well-furnished school buildings in the city of Oakland. All true Californians are pleased to learn of the growth and the interest in educational affairs which are seen and talked about in Los Angeles and other cities of our State.

In a comparison of the conditions and the provisions for education in our cities with those for our towns and country districts, it is a case of loving Cæsar not less but Rome more. No less than ten cities of the State are to-day exercising the power of providing special school funds without a vote of the people; the rest of the State is prohibited from so doing. In this I see a possible trend indirectly toward the old district system. Cities with concentrated wealth, under a general State school tax, pay more money into the general school fund, State or county, than they get back in redistribution. Hence, without strong patriotic sentiment, without State pride, without a feeling of relation to the country about them, cities would naturally be in favor of abolishing the State or general school tax or of reducing it to a minimum, that they might be left to themselves to support their schools. Therefore, if cities could not raise special funds annually, except by the precarious method of popular election, their strong influence could be depended on for securing a liberal fund by general State and county taxation. At any rate, if this special favor is to be continued in cities—in cities of the third, fourth and fifth classes—why not extend it, with some restrictions wherein necessary, to smaller cities, towns, and even to country districts?

In many of our cities a supervising principal, with few or no classes to teach, is presumed to earn a good salary in inspecting the work and giving instruction to not more than eight or ten teachers. In our country towns and districts, hundreds of teachers, in buildings of from one to ten rooms each, have no supervision except the county superintendent's half-day annual visit. There is certainly a lack of adequate provision for supervision in this last named instance. In a number of our large counties—San Diego, San Bernardino, Fresno, Santa Clara, Sonoma, Los Angeles, Alameda and others—there are, exclusive of the cities which these counties contain, from 100 to 300 teachers engaged in teaching in the district, town, and village schools. The county superintendent in such counties, be he ever so efficient and industrious, can do but little in supervising the instruction. If the supervising principal, as mentioned, in the city, is doing the State good service in overseeing ten teachers, then the State's duty to her children is being sadly neglected in the case of those that are in charge of the 100 to 300 teachers who are practically without supervision.

The duties and the demands upon the county superintendent in one of these large counties are scarcely to be conceived by one who has not an intimate acquaintance with the affairs of the office. Among other things, the law demands that he shall visit every school in his county at least once during each year, while, at the present time the question is raised in every county as to the legality of the appointment of a single deputy. Therefore, with the manifold duties devolving upon the superintendent in the business department of his office, and the limited time and means at his disposal for professional duties, the department of supervising the instruction in these large counties must, under existing conditions, be more or less neglected, or at best must receive but superficial attention.

The expedient and proper remedy is difficult to determine. For want of some better plan, I offer by way of suggestion, that legislation be asked providing that schools outside of cities having city superintendents be grouped into supervisory school districts, such districts to consist of not more than ten different schools, employing not more than thirty teachers, and that over each of such districts there be appointed a supervising principal, the salary of same to be paid by the State as other State officials are paid.

The manner and method of grouping or subdividing into such districts, of appointing such principals, and of prescribing their general duties, are matters of detail which could easily be agreed upon. Is this, or something like it, unreasonable in view of the wide difference between school supervision in the country and school supervision in the city as to-day provided for?

I would not contend that it is reasonable or desirable to attempt to make school facilities in the country equivalent in all respects to those in cities. I have in mind scores of towns throughout the State with population ranging from 1000 to 5000, that come within the category of country schools, as well as do the country districts of one, two, three or four teachers. It is not a common level that is sought. It is not so much uniformity of method as uniformity of effort that is desired. It is unity —the spirit of oneness or singleness of purpose in the administration of a great system for which I would earnestly contend. The thought is well expressed in the Good Book, in substance these words, "we are all tied up in the same bundle of sticks."

The educational as well as the material interests of any one portion of our State are directly or indirectly connected with every other portion. Therefore, as educators, superintendents, teachers, city teachers, country teachers, *all*, we should endeavor to cultivate a strong, fraternal, patriotic sentiment in reference to the work in which we are engaged; and, in so far as our impress may be made on our State school system, may it be transmitted to posterity unimpaired in its original design, unswerved from its intended purpose.

THE ETHICS OF THE PUBLIC SCHOOLS.

PROF. SEARCH.

This is a day of earnest educational awakening. Intelligent thought, within and without the teacher's profession, is being applied to the teacher's work. The recent reports of the Committees of Ten and of Fifteen, upon the existing needs and the improvement of the secondary schools, are the most powerful documents in the history of American pedagogics. The kindergarten is contributing its genial spirit all along the line, while the university is intensely interested in the development of the best lower-grade schools. The discussions of the Herbart Club, the investigations in child-study, and the doctrine of individualism have been turning inward the eyes of schoolroom methods. The American magazines are full of earnest criticism, which the better school men are receiving at its proper value. But of all questions that are and can be propounded there is one of supreme importance, growing more and more out of the trend of economic considerations; and that is, What is the ethical value of schoolroom results? In what way are the public schools lifting the children of America to a higher as well as a broader plane of life?

This is a vital question, for the public schools represent the spirit and foundation of our nation's life. The home is of too unfortunate an average standard to present at large a high ideal; the Church is too limited in its range of contact; but the public schools, with their seventeen millions of children, represent the integral life of to-morrow's promise, and have the everything of opportunity for the making of men and women, and for determining the future of the republic. Therefore, the great, the vital question of the educational world is, What are the schools doing toward the making of character? For this is the supreme end of all education. If the public schools are not given a moral, as well as an intellectual and physical development; if they are not lifting mankind to a higher standard of life, then they are not meeting the requirements of their mission and have no right to their place in our national economy. We are in the midst of a sea of perils: the tendencies to so-called socialism, communism, and the materialistic; our tramp life and the parasitic elements attaching themselves to the industrial movements of the day. But these perils cannot be met by a nation adrift. There must be a rudder to our ship of state; and that rudder must be character in citizenship, which is possible only as the direct product of educational effort.

The charge is frequently heard, advanced by those who have not caught the spirit of modern education, that "the public schools are godless schools." This is the cheap doctrine frequently taught by those interested in the denominational school, and sometimes uttered by some narrow ecclesiastic who feels that his profession has a monopoly of all ethical teaching.

Now I hold, essentially and fundamentally, to a complete separation of the Church and the State; but there is one thing to be remembered—this is a nation founded in religious faith and characterized by the recognition of supreme intelligence. This is not a nation of agnosticism. The consecration of the Pilgrim Fathers; the precedent prayer of the framers of the Declaration of Independence; the historic prayer of Washington at Valley Forge; of Lincoln in another night of national gloom; the appeal of Garfield to the frenzied mob in New York; the national recognition of Thanksgiving Day and of Christmas as legal holidays; the universal celebration of the birthday of Christ—which if any man doubt, let him go walk the business streets at Christmas-tide; the observation of the Sabbath Day, enforced in part even upon the doers of evil; the "As you shall answer to God" in the customary oath of every court in the land; the time-honored kissing of the Bible as the President of the United States takes his chair; the opening of Congress and legislatures with prayer; the maintenance of chaplains in the army and navy, and in all State institutions of penalty and reform; the many State mottoes; and the coin, of current use, which expresses the underlying faith of the Republic in the talismanic words, "In God we Trust"—these, and many other characteristics, indisputably evidence that this nation—the American nation—is fundamentally and forever a Christian nation, and as such has a right to the recognition of God in the public schools. I like the teacher free from religious cant and denominational bias; but, at the same time, I admire the one who in viewing creation does not close his eyes to glimpses of the Creator, and who does not hesitate to look up from "Nature to Nature's God." This is not sectarian in principle, and is thoroughly indorsed by State Constitutions ordinarily thought to be suppressive. Freedom and liberty and national practice demand that the teacher, in her work, shall have the right to the recognition of God's sovereignty; and many more than the people think are they who permeate their work with such vivifying essence.

But while the idea of God has its entitled place in schoolroom recognition, I do not believe ethics is best taught as a creed. During the past few years quite a number of text-books on ethics have been published for use in the secondary schools. Such instruction has little more than Lilliputian value. Ethics cannot be taught from the outside. Ethical training cannot be something of extraneous character, but must be an integral part of the every exercise of daily life—the atmosphere in which one lives—the spirit which one breathes. With this view of the question, the public schools are pre-eminently the place where opportunity is given for character-building; and if in any respect the output has been unsatisfactory, it behooves the people to be awake to the necessity of providing conditions that will make all the more powerful this fundamental factor of the American republic.

Now let me consider a few cardinal features of the public schools that tend toward ethical culture.

There is an ethical value in *activity*. "An idle brain is the devil's workshop" is not only a trite saying but a truism. While an active child may become a doer of evil, his chances of such outcome are not one per cent. of those of the lazy boy whose life is a ready prey for the invasions of the infesting vermin of immorality. There is hope of an active man, for activity is the essential principle of life; but the lazy man—what company is there that would insure his chances for Heaven?

There is an ethical value in *order*, which is "Heaven's first law." Now this is a point of pre-eminent importance. The most expensive thing in all educational and indeed divine economy is disorder. Well does the superintendent hesitate to have his own child in a disorderly school. Why? Because disorder is immoral. Very frequently a disorderly school appears, but the cry is, "Give the teacher a chance!" Every fair-minded school executive is willing to give almost any teacher an extended chance, excepting the teacher in a disorderly school; for there is somebody else who must have a chance, and that person is the child. The loss of respect for authority, the consciousness that there is something smart in evading the teacher and in doing wrong, the encouragement to deception and dishonesty—these, and a hundred other elements in a disorderly school, make for the unmaking of character. As a parent, the educator would not let his own child live in an atmosphere of disorder; and if given opportunity as superintendent, he would not enforce upon any other person's child such unfortunate conditions. Let it be emphasized that disorder is immoral, while the opposite of such conditions tends to ethical development. Now the order which is here deemed so desirable is not the old-time dead order of inspirationless form and absolute quiet, where the normal activities of life gave place to the more important ticking of the clock, but that happy condition of vitalized workers most favorable for the performance of work. That prohibition of whispering and other arbitrary exactions are immoral is more than susceptible of proof. Order to be of ethical value must be of natural character.

Again, there is an ethical value in *habit.*' It is habit that forms us, that makes us or damns us. It is not God that says "Thou shalt not be saved," but habit which renders the soul impervious to salvation. In sin, the primary effect upon the sinner is never as great as the secondary. The boy who runs away from school does wrong, but the sin he then commits is not nearly so great as the ones he will commit before the day is over. It is the mission of the school to form correct habit, to give correct thinking and the placing of one's life in conformity to that which is true and good.

There is an ethical value in *association.* I admit that association under inactive, disorderly circumstances and conditions of improper habit is immoral; but, on the other hand, the child brought up by himself is fearfully unfortunate in his moral tendencies. The highest type of manhood is not developed in the monastery, or under circumstances of riotous imagination, but face to face with the realities and temptations of life. The country boy who seems so sturdy will fall sooner than the town boy when subjected to the temptations of city life. The old-time separation of boys and girls in schools and seminaries had its fearfully expensive results, which disappeared largely in the presence of co-education. We all need association, and in the associations of the public schools there is a purifying influence not easily estimated. True, there are parents who are reluctant to send little children to the public schools because of fear of taint; but such persons have known little of the character and possibilities of the better school. There are, no doubt, objectionable things that appear even in good schools; but compared with the things which will go wrong in model homes, it is a wonder that the superior results are so pronounced in the public schools.

Literary culture has its value in the formation of character. The analysis or framing of a pure sentence, the contact with a lofty thought, or the appreciation of a noble sentiment, all give color to the better tastes. A man cannot sing a verse of *home, sweet home*, and at the same time commit a crime. A child cannot read the selection in his reader, entitled "The mysterious stranger," by Jean Taylor, without being struck with man's ingratitude to God. The reading of "Black Beauty" leaves an indelible impression upon the mind and the heart. And so may be said of the entire realm of literature, and indeed of all intellectual operations. The beauties of literature proper and of choice language; the inculcation of noble sentiment; the impulse that comes from thought contact with the lives of the great and good; the philosophy of history; the eternal query in the presence of the stars, the rocks, the flowers, and lower animal life; the comprehension of the inevitable effect of a definite cause; the precision in mathematics, the absolute certainty of the old *Pons asinorum*; the influence of good music; the divinity in art; the harmony in law; the delights of creation in the shop; the good health of the gymnasium—all are rich in contribution to man's moral improvement. The dwelling of the mind upon any pure theme helps in purity of thought; and hence the subject-matter of the school-work has ethical value. The fact that a few persons who have thought mathematics, written literature, and solved scientific problems, have still become villians, means nothing; for angels of light have fallen from Heaven, and even a Judas went astray, although associating with the Christ.

There is an ethical value in *play*. This is not the old Puritanic idea. Far be it from the purpose of this article to cast reflection on the essence of the Puritan faith, nor is this being done; but the world has made great strides. There is no saving grace in a long face *per se*. On the other hand, a joyous spirit is one of God's best gifts. Play in children is a divine expression. The school recess has been understood to be so many minutes for pure air and for a "let-go" exercise. It should be an educational opportunity for moral development through play. There is nothing on the school premises so fruitful in demoralization as the standing around of school children, or grouping together, with nothing to do. On the other hand, play, sport, and romp, under proper direction, have inestimable value. They bring to the surface the pure joy of the inner life and bless childhood with God's best beneficence—the sunshine of his smile. It will do any older man good to stand in the presence of children and see them play—it will bring better thoughts to the hardened heart—it will do the children good upon earnest participation.

In all the particulars already specified the public schools are making character of a higher order. But there is another and even a more powerful factor in ethical training, and that is *motive;* the principle underlying action, the determinative volition that leads to formative results. This indeed belongs properly in discussion to the disciplinary factors, but it so far transcends all the rest that it is here given a major place to give greater emphasis.

The old-time idea was that the child must bring his life into conformity to requirement. Not *can*, but *must*, was the principle of action. The teacher with eyes in the back of his head was the best teacher. There was no choice, no volition, no spontaneity—all was repression and enforced obedience. It was taken for granted that the child disliked school, that the pursuit of knowledge was distasteful, and that there was no safe way for the master to maintain his place, excepting by breaking the will of disobedient pupils. Growing out of this spirit came a long line of false incentives, which for years were all-powerful in sway; and their ghosts still walk in many schoolrooms, and even in some Sabbath-schools at the present day. This reference is to rewards of merit, the keeping in at recess on so many demerit marks, prizes, percentages, honor places, discriminating rankings, and a hundred other inventions of the Evil One. The child who is taught to work for a prize, be it even in committing to memory passages of the Scriptures, is bribed, and, to that extent, corrupted. He is not taught to love truth because of its own beauty. There grows up within him, not pure love for the thing presented, but a desire for something unnatural, something selfish, something temporary. The child taught to work for a per cent. never rises higher than his motive. He may work himself to a frenzied heat in his all-pervading desire to be first or to gain a high marking; but such a student remains not a worker after such unnatural stimulus is gone. He has passed his objective; his love for work dies stillborn. Hence, all such incentives are false to the spirit of education and are immoral in their tendencies.

I have been thirty-five years in the schoolroom as pupil and teacher; have lived a good part of that time (with regret be it said) in the atmosphere of prizes and per cents.; have watched their false spur and unnatural coloring of character; have looked upon noble ambition perverted to things abnormal; have seen the physical, intellectual, and moral wreckage that ensued; and as the result of personal investigation and personal experience, I do not hesitate to pronounce the whole system of incentives, to which reference has been made, as abnormal, unprofitable, false, and immoral. Their entire tendency is to temporary result, to stifled interest, to the recognition of an unnatural means as an end, to the development of a selfish spirit, and to dishonest practice, as well as to overpressure and overnervous and physical strain.

What should be given the child in their stead? Nothing but a higher motive; and that is, to work from pure love for work and because it is right. It is false to say the pursuit of knowledge is unattractive. There is not a boy or girl in all the world who cannot be touched by the right teacher. He may be lost in the mechanical school; but, in the presence of spirit and an encouraging smile, the barron wastes of fruitless endeavor spring into vernal life, and the beginning is made for a richer realization.

The fact is, only our methods of approach are distasteful—truth is always attractive. The rich realm of learning is full of pure delight. The so-called bad boy needs some one to start the machinery of his life into operation—to find for him a field of interest and to give him inspiration. In the presence of the true teacher—not the school-keeper, but the teacher—there is the warming into life of the dormant germ of divinity, and the best of all results become possible under the influence of true motive. To think otherwise would make a skeptic of the believer in education. Interest; *interest!* What a world of possibility and delight is being unlocked by this key to the salvation of the uninterested and lost!

The public schools, under the practice of proper motive, give excellent opportunity for the cultivation of an unselfish and generous spirit. With the removal of the desire to surpass others for the bare sake of being ahead, there comes an interest in others' welfare, and cultivation is given to the true spirit of true socialism. The kindergarten has brought a rich contribution to the public schools in this particular. The Thanksgiving offering, now the happy custom in many schools, is intended least of all for the good it will do the poor, although that is considerable; but it is a means to a greater end in the education of the child.

Consideration has been given to the motive involved in *study;* let us now direct attention to the motive belonging to *government.* All true government must be self-government. There can be no such thing as substitution of endeavor or responsibility. "Self-effort alone has educational value; to direct self-effort is teaching." Even so in a school government, the *Ego* must have opportunity for determination. As already referred to, the school of the old education was all repression and authority. There was no recognition of *Will* as an immortal part of the child, appealing for education. There was no spontaneity, no choice. There might have been order of a kind, but it was enforced order. If the teacher, or even the college professor was late, the students "bolted." If the teacher was called without the door, the school was bedlam.

Not so the school of appeal to higher motive. There the thing presented is the *law,* not in its magesty, but in its *beauty.* The child is taught to realize that harmony is the sole end of all requirement. Offending, he stands in the presence of the broken law. His act has disturbed the entire relations of the school, has brought discord where should have been harmony, and in consequence others are unhappy. Sin is a heinous thing, making us unlovable and unloving. As such, and because it violates the principles of eternal right, it removes us far from the sunshine of each others' enjoyment and of God's smile. How much better it is for us to be true to our relations in the school and in God's economy! How dependent upon our individual action is the harmony of all about us, and how we contribute to the sunshine of all who know us when we are faithful to our individual responsibility!

I like the inspiration involved in the thought that the teacher expects, not forces, every child to do his duty. Such a spirit saved England in the days of Lord Nelson; raised France to her high position during the period of Napoleonic glory, when that daring leader cried out, "Men of France, the eyes of thirty centuries are looking down upon you;" and it is just as powerful as an incentive when applied to calling forth the nobler principles of the child heart. Personal responsibility belongs just as much to the child as to the maturer person. Many a man has been saved by responsibility, and so may be the case with the child.

For this reason I do not like watching children and the employment of detective characteristics. On the playground the teacher should be present, but more because of interest in the children's happiness and participation in their games. Of every child there should be expected his duty; and he should be given the utmost confidence until he proves himself unworthy; and even then he should be forgiven "until seventy times seven."

The schoolroom should be characterized by natural order and self-reliant strength. No school is ever organized for effective work until self-government is possible. The teacher's place in the room is as the inspiring director of the children's endeavor; but should the teacher be called for a time from the room, the school so trained continues its perfect order. As superintendent, the writer once had a school of fifty pupils that ran itself for eleven weeks without a teacher; but, let it be said, such a condition is not the result of corporal punishment and other pernicious methods of appeal. Self-reliance, independence, and character itself come from within, not without; and never until a child is so taught to work, is he safe for the duties of life and of citizenship. There must be utilization of the will, there must be determining choice, or self-reliant, trustworthy character will not be the product of the schools. The school must be in miniature what God has made the entire world to be—a place where character is formed, not by arbitrary requirement, not by fatalism, but by responsible choice.

I have already referred to the ethical opportunities presented by association, but there is a factor not yet directly discussed, and that is the *teacher*. There are teachers, and there are others who falsely enter that holy office. It is not intended to say that all teachers who fall short of the high results described are failures. Far be it from such a conclusion, for there is many a faithful worker, doing valient service for humanity, who stands discouraged at many an evening hour over the work of the day; but this much is implied, that the greatest teacher is the one successful as outlined. There are teachers in whose very presence is delight. The child feels the inspiration of a great life, and is influenced accordingly. Such a teacher is an effective apostle of a better living, and gives an uplift and an impulse to the student's life that cannot be measured this side of eternity. After all, it is not so much a question of the Bible in the school as it is a question of the teacher with the Bible in her heart. Such a teacher glorifies her vocation and leaves immortal impress upon all she touches.

What a glorious thing to the child to be permitted contact with such a personality—and there are many of them! Under such direction how all the world opens up with a diviner light! Duty faithfully performed in the schoolroom brings its conscious happiness. Under true motive the various departments of work assume a higher character. The true spiritual being finds expression, and all the world takes on a higher manifestation of law, of order, of beauty, and of God.

As this article was in the simmering process, I stood one day in a schoolroom, attempting to apply the ethical query to the work I saw in progress. What, after all, I thought, is the value of the schoolroom exercises in the making of character? Is it possible I overestimate the glimpses the child gets of that which is divine even in his day school work? Environed as the teacher often is by the appearance of agnostic sentiment, is there opportunity to leave with the child the realization of God, purely through the ordinary realm of school studies? As I was thus querying, I saw a little girl of eleven years busy in a language exercise. Stepping to her side, I leaned over her desk and saw these beautiful words flowing, in reproduction, from her pen:

"God hath a presence,
And that you may see
In the fold of a flower,
The leaf of the tree;
In the sun of the noon-day,
The star of the night;
In the storm of the darkness,
The rainbow of light;
In the waves of the ocean,
The furrows of land;
In the mountains of granite,
The atom of sand.
Turn where ye may
From the sky to the sod,
Where can ye gaze
That ye find not a God?"

Surely the public schools are fruitful in opportunity for character building; and bright indeed will be the crown of rejoicing of the teacher who is faithful in all the little things that go to make her work glorious. There is no vocation greater in its possibilities than that of the teacher. Eternity only will reveal the full work and bring the perfect reward of those who, through discouragement and weariness, have "built far wiser than they knew." Unseen, and perhaps unappreciated, they toil on in answer to the divine call. The little word, the kindly act, the encouraging smile, finding expression from a generous heart, like a ray of light through the window of an overfull soul, becomes the implanted germ of an ennobled life. Well may it be said of these faithful teachers—and there are many: "They that be wise shall shine as the brightness of the firmament; and they that turn many to righteousness, as the stars forever and ever."

THE EDUCATION OF THE HUMAN ANIMAL.

PROF. BAILEY, JR.

(A SYNOPSIS.) Like other animals, human beings must be (1) trained for habit, (2) nurtured for instinct, (3) developed for aptitude. In our lowest tendencies and instincts we are as truly human as in our highest intuitions and faculties. We are not animals first and human beings afterwards, but we are human animals at the start. We need to remember that the phenomenal law of our unfolding is biological, but that our end or aim and the quality of our powers are human, and, therefore, divine. Only from the standpoint of a religious philosophy and a philosophical religion, can we see life in its fullness of meaning, and Education as the gaining of the fullness of Life for the Sake of the Work.

(1.) *Training for Habit.*—Habit saves force, makes functions structural, makes consistency of character, possible. The habit striven for by education does not suppress spontaneity, but regulates and equilibrates the same in such wise that our habits express our spontaneous nature so far as it is worth expression, and our spontaneity expresses our habitual nature. Thus our habits ought to be the regularized results of our healthy and holy instincts and aptitude. Hence the best minds must determine what is best for children, and their instincts and aptitudes must be attuned to *the best*. Fortunately, directly or indirectly, the best minds agree as to the best character in its historical appearance.

(2.) *Nurture for Instinct.*—We may define instinct as teleological activity not dependent on individual experience, and not conscious of the adaptation of means to end. Man's instincts not only include the human form of "animal instincts"—biological, psychical (curiosity, power, etc.), social, but also the "ideal instincts"—æsthetical (artistic, philosophical and religious), and the more special, logical and ethical instincts. There exist in children as more or less pure tendencies. They need to be educated, that is, nurtured. The "ideal" must control and glorify the animal, and these must furnish force and vigor to the ideal. Hence the education of "many-sided interest," not dissociated from habit-training.

(3.) *Development for Aptitude.*—A human animal is a partially independent monad, "reflecting the whole universe from its own peculiar standpoint." The individual's special power ought to be developed. From the very start, respect ought to be had for individual differences. Never can individuality safely be rid of training for habit, and nurture for instinct. We want to educate a John Smith, but he must be a well-trained human animal, with well-nourished, equilibriated instincts. History, experience and philosophy tell us that the supreme factor that makes for equilibration and integration of character, is religion. Somewhere, somehow, this supreme agency must act upon the human animal by means of true-hearted "sons of God."

A spirited discussion followed in which the following speakers participated:

PROF. GRIGGS, Palo Alto:—It is impossible to express my appreciation of the noble paper just read. We are emerging from the medieval conception of education. No fixed form, no patent system will do for to-day. Each child must have different training from every other child.

MISS MANNING, San Francisco:—I wish only to emphasize the sentiment ———that the worst education that teaches self-denial, is better than the best, that teaches everything else, and not that.

Mr.———In condemning prizes we condemn the whole system of Great Britain. Without prizes would Great Britain have achieved as much as she has?

MRS. HOOD, Palo Alto:—A child is entitled to the best that can be given. If there is something better than prizes, why not give that? The child of the greatest activity and the greatest brain power may act as your bad boy. The bad boy often shows off the poor material of the person trying to control him.

PROF. HOWISON, University of California:—What is the chief end of action? Is it some good absolutely, or some good for the individual? We are incapable of action if at the end we are to get nothing out of it. I protest against the pushing of the idea of duty so far as to say that desire for self-gain is wrong. Have I not rights as well as duties, and does not morality consist in the recognition of one as well as the other.

When a man insists on his rights he is defending the rights of every other man. The man who does not defend his rights is a moral traitor. In this theater of moral display it is the business of every one to see how high he can go, and see who can attain the highest excellence.

How much ethics can we teach in school? We ought to be able to teach complete morals. So far as good conduct is habit it is not virtue. A virtuous person is one who can be left to himself with absolute assurance that he will do right.

Prof. Search, Los Angeles:—God has left man to do as we leave the boy to do in school. Duty should be a principle of action. No person comes to duty but through deliberate choice, and no person can make a choice till motive comes before him.

Friday Evening.

The session was called to order in the Congregational Church by the President. Several musical numbers were rendered, after which the President introduced Prof. Joseph LeConte, of the University of California, who by request read the famous lecture delivered by him before the National Educational Association, at Denver, Colorado, July 15, 1895, and later printed in the *Educational Review.*

THE EFFECT OF THE THEORY OF EVOLUTION ON EDUCATION.

Prof. Le Conte.

Like all great truths, the idea of evolution has been held in a vague way even from the earliest dawn of thought. But only very recently do we observe any attempt to apply it to life. We find the explanation of this in the profound difference between the old philosophy and modern science in their respective attitudes toward truth. To the old thinkers, pure thought and gross matter, the ideal and the real, belonged to two different worlds. They never dreamed of bringing down their noble thoughts to the practical concerns of life—to apply them to social organization or politics or religion. These glorious ideas were for the delectation of thinkers only. These daughters of the intellect were too pure and holy to be married to the grossly practical. They were vestal virgins about the sacred altar of truth ; beautiful exceedingly, but forever barren. To modern science, on the contrary, every truth has, and must have, its practical application. The tree of knowledge must bear appropriate fruit for the material benefit of humanity. Evolution is now, therefore, applied to practical life, because it has passed from the domain of vague philosophic speculation into that of definite scientific knowledge. This change has not taken place all at once, but only by the successive labors of many men, each contributing his own characteristic part. It was the part of Lamarck to awaken scientific attention and deeply stir the scientific mind. It was the part of Darwin to convince the scientific mind of the truth of the evolution of the organic kingdom. It was the part of Spencer to extend the law of evolution to embrace every department of nature, and thus to make it applicable to society, to religion, and to education. It was the part of Huxley to fight the battles of evolution and to conquer its acceptance by the intelligent, but unscientific public. It was, and is, the part of American evolutionists to complete the evidence from palæontology where it was weakest, and also—for we are less hampered by tradition here than elsewhere—to apply it fearlessly, yet I hope reverently, to religious and social thought.

The final effect has been to revolutionize our whole view of nature and of man ; to change the whole attitude of the mind toward truth and thus to modify deeply our philosophy in every department ; and, therefore, to modify profoundly our theory and methods of education. It is this effect on education that I wish to bring before you this evening. But the subject is so large, and my time so short, that I can only touch lightly some most salient points.

I would be glad to point out to you how the theory of evolution indirectly, but in a most important way, affects education (as it does all departments of thought) by simply elevating the intellectual standpoint and widening the intellectual horizon ; but I must forego this and proceed at once to its direct effect on our theories and methods of education. And here, as you already anticipate, I must speak first of all, of its immediate effect on biology ; and then afterward on its indirect effects, through biology, on nearly all the higher departments of thought. These latter I shall call higher lessons taught in the school of evolution.

Organic evolution is evolution *par excellence*. In the mind of Darwin evolution was, and in the minds of very many it still is, identified with the theory of origin of species by descent with modifications. To many it means only a continuous genetic chain of all organisms from the earliest to the present, and, therefore, a blood-kinship among all existing organisms from lowest to highest. It is to Spencer that we owe the extension of this law of continuity to every realm of nature, and thus this mode of thinking to every realm of thought. Organic evolution, therefore, whether of the individual or of the organic kingdom, is the type of evolution. In that department the battle of evolution was fought and won. Right here, in the origin of new organic forms, was found the barrier to the acceptance of the law of continuity—the stronghold of supernaturalism in the realm of nature. When this barrier gave way, the whole domain of thought was immediately conquered. It is right, then, that I should take up this department first.

There is a striking contrast between the old natural history and the new biology. The one is perhaps best represented by Audubon, the other by Huxley. In the one imagination predominates, in the other reason; in the one, love of field and forest and mountain, in the other, thoughtful work in the laboratory. The one studies form and habits, the other structure and function. The characteristic implements of the one are the shot-gun, the insect-net and the dredge, of the other the scalpel and the microscope. In the ideal biologist these two must by united in equal proportions. Such union was nearly realized in Agassiz and Darwin, because they stood just at the parting of the ways. Zoölogists now belong mainly to the one class or the other, but predominantly to the second class. In botany, the differentiation has not been so extreme. The change is, therefore, best illustrated in zoölogy.

Such, then, is the contrast between the old and new style naturalist. The change may, perhaps, be regretted by some, but was absolutely necessary in the devolopment of biological science. The old-style naturalist had been working from time immemorial, enthusiastic in traveling, observing, collecting, describing, classifying; in a word, gathering the materials of science; but thoughtful men began to ask, "Where is the science itself?" "What light does all this throw on the real problem of life?" "What is the meaning of the classification so laboriously constructed?" "What is the meaning of the facts of geographical distribution of species gathered by such extensive traveling?" The old natural history as a real science seemed to have reached its limit, if it was not indeed already moribund. Collections of dry plants were contemptuously compared to gathered hay. Geographical distribution of organisms was a tiresome chaos of curious facts without connecting idea Just then came evolution—a great new idea, informing and giving life and meaning to this dead mass of facts, bringing order out of this chaos, "creating a soul under the dry ribs of this death." The true meaning of classification is at once revealed, viz., the various degrees of blood-kinship in descent. Geographical distribution of organisms is at once completely explained by migrations produced by the glacial epoch and the slow evolution changes produced by a changed environment, physical and organic. The strange and hitherto inexplicable course of embryonic or ontogenic development becomes now but a brief recapitulation of the phylogenic or family history. It is easy to imagine the prodigious impulse given to the sciences of life. The deepest problems of plant life, animal life—yea, of human life and social life—seemed now within reach of science. The army of investigators was increased tenfold. Biological laboratories sprang up everywhere, on lake and sea-shores, and still more numerously, in schools, colleges and universities.

Such was the intellectual impulse given by the introduction of a great new idea. But great new ideas always involve new methods of work and, therefore, new methods of teaching. The new method has been called by different names. I will call it the "evolution method." But as this is only one of many methods of science, I must introduce its discussion by a few words on scientific methods generally.

We all know the prodigious enlargement of the domain of modern thought produced by the birth and rapid growth of the sciences of nature. But until recently there has been but little corresponding change in the subject-matter of education, especially in the lower schools. This was right. The reason is obvious. All attempts to teach science by the old text-book methods gave very unsatisfactory results. Science-teaching as a means of mental culture, seemed far inferior to mathematics and the languages. These latter, at least to some degree, threw the pupil on his own resources; but science-teaching by pure classroom, text-book methods, is the barest *memoriter* exercise. Now, science is nothing if not a knowledge of nature at first hand, and science-teaching is nothing unless, in some degree, it brings the pupil in contact with nature. The new knowledge must have new methods. In a word, science must be largely taught in the field and in the laboratory. This field and laboratory method must supplement every other method in science-teaching. This is now so generally understood that it is unnecessary to dwell on it.

But there is another and deeper sense in which we may use the term method, which is even more important. It is method not in the sense of use of eye and hand, but of use of brain; not in sense of dexterous manipulation, but of orderly thinking. In this sense, scientific methods bear the same relation to intellectual progress that tools, instruments, and machines bear to material progress. They are intellectual contrivances whereby we accomplish results which would otherwise transcend our power. As the civilized man has no superiority over the savage in bare-handed strength, and the great material results accomplished by the former are wholly due to the use of material contrivances called tools, instruments, machines—so the scientific man claims no superiority over others in unassisted intellectual power, and the great results accomplished by him in the acquisition of knowledge and in the conquest of nature are wholly due to the use of intellectual contrivances, called scientific methods. These are mainly three: 1. The methods of symbols, or mathematical method. We all know the power of this method. We all know how by the use of a few numeral digits, a few letters, *a* and *b*, *x* and *y*, and a few signs, + and − and =, the veriest schoolboy may quickly solve questions which would defy the unaided power of an intellectual giant. 2. The method of experiment, especially applicable to physics and chemistry. Physical phenomena are usually too complex, too affected by disturbing causes and complicating conditions, to be understood at once as they occur in nature. The physicist, therefore, removes, one by one, these disturbing causes and complicating conditions, watching the result, until the true cause and the necessary conditions are discovered. I need not tell you what this method has accomplished. 3. The method of comparison. The phenomena of life in its higher forms are so complex that we cannot understand them without simplification, and yet so delicately adjusted that in most cases we cannot, we dare not, use the method of experiment. If we introduce our rude hands to modify the phenomena, we are in danger of destroying life itself—the very thing we are investigating. But nature herself has prepared for us three series of experiments. 1. As we go down the scale of life from man through vertebrates and invertebrates to the lowest protozoa, the complex structure and functions of the animal body become simpler and simpler, by the removal of one complication after another, until finally the complex problem of life is reduced to its simplest terms. This is the taxonomic series. 2. Again, as we go backward in the history of the development of any one of the higher animals, say man, from the mature condition through the stages of youth, new-born, embryo, to the earliest germ cell, we find that structure and function again become simpler and simpler until again the problem of life is reduced to the simplest terms. This is the embryonic or ontogenic series. 3. Again and lastly, if, commencing with the fauna of the present geological epoch, we go backward in geological time, taking successively those of earlier and earlier periods, even to the dawn of life, we find a similar series of simplifying structures and functions until we again reach the simplest possible expression of the problem of life. This is called the geological or phylogenic series. This last is *par excellence* the evolution series. But they are all evolution series, since they are similar and all have their origin in evolution.

It is by comparison of the terms in each one of these series, and of the three series with one another, that all true scientific knowledge in biology has been attained. It is therefore called the "comparative method." It was to some extent used and so named before the birth of evolution as a scientific theory; but evolution has given it a new meaning and a new power and greatly extended its application, and therefore, it should now be called the "evolution method." It is the great method of discovery in all departments which are too complex to be investigated by other scientific methods. When phenomena are too complex to be readily understood, and at the same time too delicately adjusted to submit to the method of experiment, all we can do is to watch all the stages of increasing complication—the process of gradual becoming. If by the method of experiment we put nature on the rack and extort from her the truth, by the evolution method we obtain the truth, less boldly but not less efficiently, by watching and surprising nature in her most secret modes of working.

This method, although first used in biology, may be and has been extended to all the more complex phenomena of human life—to psychology, to sociology, to politics and government, and even ethics and religion. Scientific methods generally, but this one especially, may be likened to the "little leaven which a woman took and hid in three measures of meal"—a little, very little scientific method introduced into three measures of the old curriculum has "leavened the whole lump." But we all know how much depends on the leaven. Alas, how much bad leaven has been used, especially in sociology! It is necessary, therefore, to say something of how to make good leaven. This brings me to the subject of what I call schools of methods.

It may be regarded as a law that although each one of these methods may be used in several departments, yet it is best developed and is used with most success in the simplest and lowest department, where it was first introduced; and thus this department becomes the school for its skillful use. Thus, for example, while the method of symbols is used in other departments,—as in physics, chemistry, and even sometimes in logic,—yet the proper school for its skillful use is mathematics, where it was first introduced, and is still most powerful. Again, although experiments may be used in many departments,—as in chemistry, physiology, psychology, and even perhaps in sociology,—yet undoubtedly the proper school for the skillful use of this method is physics. So also the method of comparison or the evolution method may indeed be used in all the more complex departments of knowledge, but the only proper school in which to become imbued with its characteristic spirit and practiced in its skillful use, is biology. Other and still higher departments can never take on a true scientific form until they use the method which has proved so successful in biology; and this they must learn to do in the biological school. As anatomy, physiology, and morphology became scientific only by becoming comparative anatomy, physiology, and morphology, so also psychology will never become scientific until it becomes comparative psychology, nor sociology until it becomes comparative sociology.

I have said that the leaven of scientific method has leavened the whole lump of the school curriculum. I now go farther and say that the leaven of evolution and the evolution method has leavened the whole lump of human knowledge, especially in all those departments which are too complex to be subdued by other methods. This method is applicable not only to plant life and animal life, but also to all the phenomena of human life, individual and social, and therefore to psychology, to language, to history, to sociology, and to ethics. In fact, the enormous recent advances in all these are due wholly to the use of the so-called historic method. But what is this but another name for the evolution method? It would carry me too far and take me too long to justify this assertion in all these departments. Let me draw your attention only to a few of the most important lessons taught us in these higher departments.

A lesson in psychology—Until very recently, the psychical phenomena of man were studied as a separate department of knowledge, having no possible connection with any other and capable of investigation only by the method of introspection; and an elaborate system of philosophy has thus grown up wholly separated from other knowledges. But it is now no longer possible to admit such disconnection. There can no longer be any doubt that man, both body and spirit, came by a process of evolution from some lower form of animal; that humanity emerged gradually by a natural process out of animality. Not only every organ and function of the human body, but every faculty of the human mind, has its beginnings and foreshadowings, its embryonic condition in the higher animals. It is quite evident that psychology can never become a progressive science until every stage of the development of the psychical nature of man is traced; until the psychical phenomena of man are studied in comparison with those beginnings of the same which we find in the higher animals, and in infants; until we trace all stages of the process by which they became what we find them in the mature man. Moreover, even the experimental method is now applied to psychology with encouraging success. We have thus in psychology at least three methods of research, viz., the method of experiment, the method of comparison or evolution method, and the method of introspection. The relative domains of these have not yet been adjusted. The experimental method, from which so much is now hoped, although undoubtedly of great value, is, I believe, limited in its application to the lower phenomena, *i. e.*, those most allied to physiology. Introspection, on the other hand, is limited to the higher phenomena, *i. e.*, the distinctively human. The method of comparison, or evolution method, is probably without limit in its application. It is to this method, therefore, that I look with most hope.

A lesson in sociology—The old idea of the origin of things was that of creation at once by fiat, without natural process, and permanence thereafter until another creation. Hence arose the doctrine of instantaneousness of specific origin and the permanency of specific types. According to this view, if the organic kingdom advances at all, it must be by successive exterminations of old forms and re-creations of new and better forms. According to this view applied to the domain of philosophy and science, all truth must be absolute, unchangeable, and permanent; and therefore, if knowledge advances at all, it must be by a succession of theories exploded and other and better ones substituted. In theology, views of God, of man, and of nature and their mutual relations must be either perfectly true or utterly false and baneful. Forms of religion and creeds are either perfect, God-given truth or else inventions of the devil to deceive mankind. Toleration, therefore, is inconsistent with loyalty to truth. In politics, the unreasoning antagonisms of parties come necessarily from this attitude of the mind. In social philosophy, improvement in society can only come by utter destruction and complete reconstruction out of entirely new materials. Thus, in all things, by this old view, advance can take place only by a succession of catastrophies and remakings out of the whole cloth.

Evolution changes the whole attitude of the mind in this regard. The very first lesson taught by evolution is that nothing originates all at once, like a creation by fiat; but all things are in a state of continuous change and growth. Progress is not by a succession of destructions and re-creations, but by a gradual process of evolution. As in the evolution of the organic kingdom, some forms, *i. e.*, the more rigid, perish and leave no progeny, while some, *i. e.*, the more plastic, are modified into new forms, better suited to the ever-changing environment, and all the new forms come thus only by modification of the old; so in the advance of science, some ideas and theories die out and leave no progeny, while others are modified to newer and truer forms, and all the new and true forms come thus only by modification of the old. And so also the progress of society, of religion, of all things, is not by sweeping destructions and recreations out of new materials or reorganizations on an entirely new basis; but must be only by modification of old forms into the higher new. In a word, the social organism is not made but grows.

A second lesson in sociology—There are two views of the relation of the individual to society which may perhaps be called the ancient and the modern. According to the one, the individual is wholly subordinate to society, and has no rights in the presence of social interests. The individual has no value except as an organ of the body politic. This view is abhorrent to the modern mind, which has indeed gone to the other extreme of apotheosis of the individual. This great change was undoubtedly due to the introduction of Christianity, which exalted to infinity the worth of the individual immortal human soul, while it correspondingly belittled the value of society as earthly and temporary. This was especially true of the early Christians, for whom the end of the world was near at hand. This idea of the supreme importance of the individual, and that society exists only for us, the individuals of to-day, has reached its culmination in the present time, and nearly all the evils which now threaten society may be traced to this source. The higher law of the ancients was the interest of society; the higher law ot the moderns is the dictate of the individual conscience. The evils of this extreme view are becoming so obvious that there is a strong tendency to swing back again to the other extreme of socialism. Now, there is a profound truth in both these views, and they must be combined and reconciled in a true social philosophy. This, I believe, evolution will help us to do. Let us see.

Organic evolution reached its term and completion in achieving man. But evolution did not stop there; for in achieving man, it achieved also the possibility of another and higher kind of evolution, and was therefore transferred to a higher plane, and continued as social evolution or human progress. Now, as the higher end, the true significance, the *raison d'etre* of organic evolution was the achievement of man; so the highest and real meaning of society and social progress is the achievement of the ideal man. This view entirely changes the relation of the individual to society by giving a new and nobler meaning to society. Individual interests must be subordinated to social interests, not only because society is the greater organism, nor even because it represents all other individual interests, but also, and chiefly, because society is the only means of achieving the ideal. The higher law from this point of view is loyalty, not to society as the ancients would have it, nor yet to the individual conscience as we moderns would have it, but to the divine ideal humanity. Fortunately for us, however, the highest interests of the individual are also thereby subserved.

This point is so important that I must stop a moment to explain and enforce it.

The social organism has often been compared to the animal organism, the body politic to the animal body, and social progress to organic evolution. Doubtless this comparison and the inferred likeness may be and have been carried much too far. Doubtless there are many fundamental differences arising from the presence of new and higher forces in the social body, and of newer and higher factors in social progress; and no one has insisted on this more than I. But it is a mistake also to minimize the resemblance. It has been common for the opposers of such resemblance to say that in the ideal of the animal organism, the life and individuality of the constituent parts are completely merged in the life and individuality of the whole; that the part is of no value except as an organ of the whole; and that while this ideal may have been to some extent realized in some ancient societies, it is utterly abhorrent to the modern mind; the infinite value of the eternally enduring human soul forbidding any such merging of the individual life into the common social life. But let us not exaggerate the contrast. It is not true that in the animal body the life of the part is wholly lost in the life of the whole. On the contrary, such life as each part is capable of is completely realized; each part has the very best that it is capable of. Again, it is not true that the part works for the whole without corresponding benefit in return. On the contrary, the acknowleged ideal of the social organism, viz.: that each part works for the whole, and the whole for each part is completely realized in the animal organism. Where, then, is the difference? For it must be very fundamental. It is this: In the one case the integrating bond is material and necessary, and the function of each part unchangeably fixed forever; in the other, the integrating bond is spiritual, and therefore free, and the function of each part is freely chosen, and may be freely changed for the better. In the one case, the union is by necessary law of mutual dependence, in the other by a free law of mutual love and mutual help.

Now, if society consisted only of ideally perfect, happy, unimproveable beings associated only for mutual enjoyment, then, indeed, I suppose, the infinite worth of the immortal human soul, in comparison with any temporary association, would make such association wholly subordinate to the individuals. But when we remember that human society is an association of individuals not long since emerged out of animality. nor far on the way toward a true, *i. e.*, an ideal humanity, and that the achievement of that ideal is the real end and meaning of our earthly life; and, finally, that an organized society is the necessary and only means whereby the ideal may be achieved, whether in the individual or in the race, we see at once that the immediate individual interest must be subordinate to this, the highest interest of humanity. But subordination is not sacrifice. On the contrary, it is the highest success for the individual. In subserving this, the highest interest of humanity, each individual is thereby subserving his own highest interests. In striving to advance the race toward the ideal he is himself realizing that ideal in his own person.

Why, then, are we so slow to learn this lesson? Why are we so loath to surrender our extreme individualism? I answer, not only because it is in accord with our natural selfishness, but also, and I believe chiefly, from the effects of an inherited narrow philosophy of life. Is it not evident that so long as the Golden Age was behind instead of before us; so long as man was regarded as in a state of sad fall from a pristine ideal condition; so long as it was believed that the perfect image of God, once possessed, had been lost and must be restored, not through society, but by some inscrutable miraculous agency; so long as this was the mental attitude, the supreme importance of society as a means of salvation, *i. e.*, of attaining the ideal, must have remained unrecognized? The outcome of such a mental attitude was of necessity the individualism run-mad of the present day. But if on the contrary, as evolution teaches, our race has gradually emerged out of animality into humanity; if the Divine image was at first dim, scarcely recognizable, and the mission of humanity is, not to restore, but to brighten that image until it is perfect—if the ideal, the Golden Age, is not in the past but in the future—then our whole mental attitude toward society becomes changed—then the good of the individual must be, not sacrificed indeed, for that is not necessary, but freely subordinated to the good of society; then the prevailing law is not the law of mutual antagonism and struggle, and survival of only the strongest and fittest, but the law of mutual love and mutual help, and the making of as many as possible strong and fit to survive.

Still another lesson and the last—But whether to call it a lesson in psychology, or in sociology, or in ethics, I do not know, nor does it matter much; for all departments meet on the highest plane. But I suppose it may be most properly called a lesson in ethics, for it offers us a moral ideal.

I have said in a previous lesson that individual interests must be subordinated to the attainment of the ideal. Now, what is this ideal? I believe that evolution will help us to find it. If man has indeed emerged out of animality into humanity, as evolution teaches, then must he approach his ideal just in proportion as he rises above the distinctively animal and lives habitually on the distinctively human plane; and he completely attains it when the distinctive humanity is carried out to its highest limit. Now, it is evident that this proposition involves not only a moral ideal but a means of attaining it; *i. e.*, a philosophy of the right conduct of life. Let us stop then to differentiate it clearly, but very briefly, from other and older philosophies of life. I feel constrained to do this lest you should think that it involves an ascetic philosophy.

There are two opposite philosophies of life which have hitherto dominated the world of thought, aye, and of conduct too. According to the one, our nature is essentially dual, *i. e.*, animal and spiritual, without cordial—with even inimical relation between. The pure spiritual nature is imprisoned here on earth for a brief space in an impure material body and dominated by it, and the higher spiritual nature becomes purer, nobler, freer, just in proportion as it despises, tramples underfoot, and extirpates the animal nature. This is the ascetic philosophy of life. According to the other, our nature is one. Man is simply a higher kind of animal. His pleasure may, indeed, be higher, more refined than that of other animals, but still they are all on the same plane—the animal. Pleasure, enjoyment—the more refined the better, of course—is the only end of human as of animal life. Virtue is only a more refined kind of selfishness. This is the hedonistic philosophy of life. Now, evolution completely combines and reconciles these two mutually excluding opposites, both as to the nature of man and as to the philosophy of life, and is, therefore, more rational than either. According to the evolution view, humanity emerged out of animality, the spirit of man out of the *anima* of animals; but at the moment of emergence it was born into a new and higher spiritual world of self-consciousness and immortality. If this be so, then evidently the mission of man and the true philosophy of the right conduct of life are not an extirpation but a subordination of the animal to the higher spiritual nature. And this is attained not by the natural decay nor by the voluntary extirpation of the animal, but by the natural growth and the voluntary strengthening of the higher spiritual nature. The animal was in evolution the mother and is still the nourisher of the spiritual; and, therefore, the stronger the animal nature the better, if so be it is held in due subjection. There is not an appetite, passion, or emotion of our animal nature but is contributive to our spiritual nature, if only it be duly subordinated. In our complex human nature the higher is nourished and strengthened by its connection with the more robust lower, and the lower purified and refined by its connection with the higher, and the whole man is thus elevated to a higher plane without violating the integrity of his manhood.

So much was necessary to say lest I be misunderstood as sustaining an ascetic philosophy. I repeat, then, if man has emerged out of animality into humanity, then he approaches his ideal just in proportion as he departs from the characteristically animal plane and lives on the distinctively human. In animals the whole life and activity are concentrated on the now. Man, on the contrary, by memory and imagination, and more and more as his distinctive human nature predominates, lives also in the past and the future. His life expands more and more backward and forward, until in the ideal man he lives equally in all time. For him there is equal reality in all moments, past, present, and future. He weighs in equal balance all events without any prejudice in favor of the now, and is thus, as it were, unconditioned by time. This is the ideal of wise and prudent conduct, the intellectual ideal. Again, in animals the whole life and activity are concentrated on the self, although an unrecognized self, for self hood is first recognized in man. Man, on the contrary, and more and more as his distinctive human nature predominates, lives also in and for other selves. His life expands and incorporates more and more the lives of others, through a realizing sympathy and love. He reaches his ideal in this direction when his life spreads equally over all other lives in proportion to their real worth; when self-love no longer in the least disturbs the justness of judgment or unduly influences conduct; when self and other selves are weighed in the same just balance—in a word, when he is at last unconditioned by self. This is the ideal of right conduct—the moral ideal. The moral law of equal love to self and neighbor is now fulfilled. This ideal, first given by the moral insight of the Founder of Christianity, is now at last verified by science. Observe that the condition and beginning of this whole process of evolution are the recognition of selfhood in man. But observe also that man finds selfhood only to lose it again in love.

THIRD DAY

Saturday Forenoon, January 4th, 1896.

The Association was called to order at 9 A. M., by President Barnes.

The morning having been set apart for the hearing of reports from the Committee on School Hygiene, appointed at the session of the Association in 1894. Prof. T. D. Wood of Palo Alto, chairman of that committee, was called to the chair to take charge of the exercises of the forenoon.

Papers were read by Carrie B. Palmer, Oakland; J. W. McClymonds, Oakland; Lucy Washburn, San Jose; T. D. Wood, Palo Alto.

PHYSICAL TRAINING FOR GIRLS.

MISS PALMER.

Is it possible to secure for girls a degree of physical culture which shall give them possession of their physical powers—which shall enable them to bring to their mental work, minds unhampered by the demands of neglected bodies, which shall fit them physically for the duties of life as our best schools are now training and preparing them mentally, which shall actually realize the somewhat vague claims of our various systems of physical training?

For the past few years, we have heard a great deal about the physical basis of education—about the sound body for the sound mind, etc. We have been constantly reminded of all that the ancient Greeks accomplished by their attention to the physical, and our advanced educators have made earnest efforts to cause recognition of the fact that the entire child is to be educated and not simply the mind.

Theoretically, the demands of the physical are fully recognized, practically our results fall far short of what we could wish. Theoretically we admit the physical to be the basis of all education, practically, we give it much less attention than that bestowed upon the most insignificant branch of the mental.

Consider for a moment what we are expected to accomplish and the means employed to fulfill these requirements. We are to train and educate the body in such a way as to insure its health and symmetrical development, to overcome as far as possible the unnatural and injurious tendencies of our civilization and especially those incident to school life, to correct physical defects, to train the body to graceful, easy obedience to the will and to teach practical hygiene with sufficient thoroughness to make intelligent self-care a possibility. We recognize the fact that even if we ignore the claims of the body to all of this for itself, we must still respect them for the sake of the highest mental development and often for the sake of any mental development at all. We cultivate the plant mainly that we may enjoy the flower but if we neglect the root, the flower soon withers. If we cultivate the body only for the sake of the mind we must still fulfill all of the foregoing requirements. We know that without a healthy body we can not have a healthy brain—that polished steel is not sooner dimmed by the breath than the brain by the slightest variation in the torrent of blood flowing through it.

Most of us know something of the amount of time spent by many pupils in studying and learning nothing, when because of physical conditions the mind is unable to act. This state of things leads to the frequent failure of health usually attributed to over study when in point of fact the cause is not over study in itself but disregard of fundamental laws of body and mind.

We realize also that the moral as well as the mental is largely dependent upon the physical, that from the petty wrong-doings of life to serious crimes, the cause is frequently in the physical condition.

Recognizing all of this we have attempted to give the physical its rightful place, in a rational scheme of education and what has been our mode of procedure? We have introduced into our primary and grammar schools a set of gymnastic exercises, occupying a few minutes daily, and exactly alike for all in a class, the strong and the weak, the well-formed and the physically defective, the healthy and those who are suffering from incipient or actual disease. Such exercises even if taken under the best conditions regarding space, ventilation, etc.,—even if scientifically arranged aud well taught can scarcely be expected to accomplish much of what we recognize as the physical need. Certainly they are better than nothing but do not let us attempt to deceive ourselves or others by calling this, physical education. In these grades we have also some lessons in hygiene, but in most cases they receive far less attention than that bestowed upon other subjects.

In many of our high schools there is a continuation of the same gymnastic work as in the grades but the conditions here make it a much more difficult matter, consequently even this small attention to the physical is frequently discontinued. Usually nothing is done in the way of hygiene. In some of our more advanced high schools, gymnasiums have been established and an opportunity given pupils for scientific exercise suited to the individual, but these are pioneers and have many and serious obstacles to overcome before they can begin to fulfill the just and necessary requirements, if we are really to give the physical its rightful place in education.

By the time the high school is reached the difference in the difficulties attendant upon physical work for boys and girls is painfully apparent. To give suitable work to boys is sufficiently difficult, under the present conditions to give girls work which shall accomplish the desired results is well-nigh impossible. The reasons for this are numerous. Public opinion and custom demand that from the time girls reach their period of greatest growth their lives shall be physically artificial.

A boy spends his time out of school largely in exercise and recreation. He is encouraged in many ways to engage in healthful sports. The girl is taught that nearly all exercise is unladylike except when taken under conditions that practically exclude the average girl or at best render the exercise only occasional. Her time out of school is mainly spent at the piano, reading, sewing, etc., and in recreations which are seldom healthful.

The boy is dressed in such a way as to give him the greatest freedom of movement. The girl is handicapped by her clothing in many ways. Usually she cannot even breathe freely.

The disuse of the physical powers at the time they should be developing, causes the natural desire for exercise to be lost to a great extent and even in many cases to create an actual distaste for any real physical effort. Under such conditions, her physical education must be undertaken and when we consider that it is necessary to go to the trouble of changing her dress twice for each lesson and that the time spent in the gymnasium is not recognized in any way as school work, that it has the benefit of none of the incentives brought to bear upon every other department of education, is not even mentioned in the home report, the task before us would seem to be no easy one.

In addition we are obliged to combat the effect of the vague ideas concerning the entire subject in the minds of many people who have been so confused by the strain and over effort of the old fashioned gymnasium and the posing and affectation of the new fashioned "Physical Culture" that they are not quite certain whether we wish to produce acrobats or actresses. When told what we actually do wish to accomplish they frequently fail to comprehend, and bring forward various arguments which while often worthy of but little attention in themselves, still, do not tend to make our task any less difficult. One which is frequently heard, is that girls should be able to get sufficient exercise assisting in the housework. It is unnecessary to offer any answer to such an argument, before a body of teachers who know something of the demands of physical education, but as it is frequently met and must be answered, a brief consideration may not be out of place. Supposing, for the sake of argument, that the average girl could be induced to do sufficient work to produce any effect, the tendency of nearly all work is toward one-sided development and it is certainly impossible to so regulate it as to train the entire body. Only certain muscles are used and unless other exercises are taken to supplement and frequently to counteract, the result cannot be symmetrical growth.

Be it far from us to say that girls should not learn to work, but by any stretch of imagination, we cannot call such exercise physical education. We expect to so prepare them that should necessity require they shall be able to work without straining their backs or ruining their tempers.

Another and serious obstacle is the idea held by many that physical training is, and should be, only a form of recreation. This is far reaching in its results, as it gives those who owing to reasons already stated do not enjoy exercise ; the idea that because it is not a pleasure to them they can derive little or no benefit. This argument is just as absurd as it would be if applied to the mental education. Many pupils do not and seemingly cannot be made to enjoy study, but that fact is not allowed to prevent their education. It is certainly true that the element of recreation should enter into physical training but the real work is *work* and must be undertaken with the same earnestness as that bestowed upon mental improvement. In short, if we are to get actual results, it must be placed upon the same basis and treated with the same respect.

In our best universities and colleges greater advancement has been made toward securing a suitable kind of physical training and its proper recognition than elsewhere but even here they are handicapped by what we are failing to do in the schools. By the time the university is reached, it is too late to overcome many physical defects that could easily have been corrected or prevented in the growing child and often too late to save from the consequences of an ignorance concerning the laws of health, which it is our duty and privilege to overcome. But even if this were not true and the college work could accomplish perfect results, it would make but little impression upon the average of health and the physical improvement of the race because of the small number it affects.

The public school is the only place where the masses can receive their physical as well as mental education. Our half measures have been productive of some good. Looked at from a different standpoint, however, they are an impediment to real advancement along this line because they satisfy conscience and keep us from making the effort necessary to secure effective work.

The time for makeshifts and miserably ineffective concessions to this department is nearly at an end. We must speedily go either forward or backward. If we are to advance, it must be a process of education. Once realize and cause others to understand the need and the possibilities, and we shall no longer be expected to accomplish something with nothing. The work will then have proper recognition and sufficient equipment and true physical education will have become a reality.

In California, the natural advantages are so great that an opportunity is ours which is not enjoyed to the same extent by teachers elsewhere and we may well aspire to lead in a movement which shall be productive of untold good to our school girls and through them to the race.

THE SANITARY CONSTRUCTION OF SCHOOL BUILDINGS.

SUPT. McCLYMONDS.

The branch of the subject assigned to me for discussion this morning is ably treated in several valuable books, among which may be mentioned "Sanitary Conditions for School Houses," by Marble, published by the Bureau of Education, and which may be had, free of charge, by applying to the Commissioners of Education.

"School Hygiene," by Newsholme, published by D. C. Heath & Co.

An article on "School Hygiene," by W. H. Burnham, published in the Pedagogical Seminary, Vol. 2.

Prof. Elmer E. Brown, of our State University, has also published a leaflet giving many valuable references to, and suggestions on the subject.

Of the greatest importance in securing the best hygienic conditions, is the selection of the school grounds. The drainage must be perfect.

The soil must be dry and warm. If the water line is near the surface miasma will exist.

W. H. Burnham in "Pedagogical Seminary," says: "When the ideal school house is built an expert chemist and other specialist will first test the soil of the sites proposed and the permeability of the underlying strata."

The school grounds should be of sufficient size to furnish good roomy play grounds, say a block of 200x300 feet for a school of 800 pupils. This will give 75 square feet to the pupil.

The more densely populated a city, the more need there is of large and commodious school grounds. It is the duty of a city to furnish for its citizens, beautiful and extensive parks, but it is the first duty of a people to furnish for the children ample school grounds.

The location of the building upon the school site is of importance. It should be located where it will throw the least shadow upon the school yard, say on the N. W. corner of the lot. If the symmetry of the property is affected, place the building upon the west frontage of the lot. I am aware that all authorities do not bear me out in this, but I feel certain that it is the correct position for the school building in this climate. This will secure a good sunny yard, for the morning sun will fall upon the entire play ground.

The worst possible frontage for a school building is the south, for it compels the children to play on the north side, in the shadow of the building.

I have known ice to remain in a school yard on the north side, of one of our Oakland school buildings for three successive days, while the east and the south sides were warm and dry.

When we reflect that the buildings are, as a rule, so arranged that the pupils, on leaving the warm rooms are compelled to pass over this cold section of the yard, we need not wonder at the frequency of colds and other disorders among the children.

Newsholme says that, "if possible, the play-ground should not be on the north or east sides of the school buildings, the south or west being preferred. He gives no reason for the west being preferred to the east." I can see none.

Every possible means should be taken to keep the school grounds dry. If it is necessary to cover the grounds to protect the pupils from the mud of winter and the dust of summer, the best material that can be used is bituminous sand rock. Laid on concrete it is impervious to water, thus keeping the yard entirely dry.

Bitumen is elastic enough to make a safe play-ground. The greatest advantage that this material has over gravel and planking is that it can be swept, thus securing better hygienic condition. It is the cheapest when durability is considered. It is best from a hygienic standpoint.

SCHOOL BUILDINGS.

The more durable material, such as brick, stone, and slate, etc., should be used in the construction of school buildings. The inside of the building should be made as convenient and beautiful as possible. We are all, and more especially the young, influenced by our surroundings. It behooves those who have charge of school property to see that these surroundings are in keeping with the purposes of the school—the building up of character.

The school building should consist of a basement story 8½ to 9½ feet, entirely above ground, and should not exceed two stories, each from

12 to 13 feet high. (Primary schools should have but one story and a basement.)

The basement floor of school buildings should be covered with bituminous sand rock laid on concrete. The concrete is important to keep out all dampness.

The basement should contain, besides a play ground, properly constructed closets, the heating apparatus, and a well ventilated room for wet weather wraps, thus removing them as far as possible from the school room proper.

In this climate, air should be permitted to pass through the basement day and night.

All entrances to the school building (used by pupils only) should be through the basement.

The buildings should be, in general, a single row of rooms along a corridor. This plan will secure better lighting and better ventilation. If a scarcity of funds compels the placing of rooms on both sides of the corridor, I believe the east and the west are the best.

In "Sanitary Conditions for School Houses," Marble says: "The south light is better for a school room than the east or west light," giving as his reason that the east and west light enter the rooms at a lower slant than the south light does. We *want* the slanting sun to enter the school room, as it strikes more of the surface of the rooms than any other.

It is the ability to give the east and the west rooms a sun bath daily, in the absence of the pupils, that makes them, in my opinion, so valuable for school purposes.

I consider the east rooms more desirable than the west, for the reason that many mornings are cold, while the mid day and afternoons are warm.

Newsholme says that the best shape for a school room is oblong, the sides being in the proportion of 4 to 3. The same authority claims that 150 cubic feet should be allowed for each pupil, and 15 square feet for floor space—the ceiling of the room being 12 feet.

Taking these requirements, fifty pupils would require 750 square feet of floor, giving a room of 31x24. Our standard rooms in the Oakland Department are 36x28—a ratio of 9 to 7, giving 20 square feet and 220 cubic feet to each pupil.

The long side of the room should always be placed toward the light. The ceiling should be white, and the walls any color restful to the eye.

From a hygienic standpoint, the walls should be of a material capable of being washed. Paper is particularly bad, as it absorbs the impurities of the room.

The corridors of the building should be large and well lighted. The walls of the corridors should be white.

LIGHTING OF SCHOOL ROOMS.

Marble says: "It appears to be a well established rule that light should be admitted on only one side of the school room, and this at the left of the pupils." He also says that it may be permitted to admit the light partly from behind the pupils, well to their left, but criticises this method when the teacher is taken into consideration.

Newsholme says: "The worst possible light is that which comes from windows facing the scholars. It throws the teacher's face in the shade, and likewise the books of the pupils. A light from behind obliges the pupil to sit in a twisted position in order that his book may not be in the shade. * * * The best light is that which comes from the left, and does not necessitate any other than an erect position in order that it may fall directly on the desk."

Other authorities agree with those already quoted. We conclude that the school room to be properly lighted should be lighted from one side, and that, the left of the pupils. The windows should be on the left and as much to the rear as possible, and should extend as near to the ceiling as construction will permit. They should not come within less than 4 feet of the floor.

Authorities differ as to the exact ratio of the window space to the floor space, varying from 1-4 to 1-10. The best authorities, however, insist that a room is not properly lighted if the glass surface does not exceed 1/6 of the floor space. A room 24 feet wide and 30 feet long should have a glass surface of 144 square feet.

An ordinary school window is 3′ 3″x 8′. The same room would require six windows. Authorities agree that the space to be lighted cannot be in width more than 1 1/2 times the height of the top of the window from the floor.

If the top of the window is 12 feet from the floor, the greatest distance that the window will properly light is 18 feet.

You will readily see the reason for this, remembering that the intensity of light diminishes as the square of the distance increases.

With improved ventilation there is no necessity for high ceilings. With ceilings from 12 to 14 feet, it is impossible to comply with the above rule as to width of rooms. I believe a school room, in width 2 1/2 times the height of the top of the window from the floor, provided the bottom of the window is four feet from the floor, and, provided further, that the glass surface is equal to one-fifth of the floor surface, is fairly well lighted.

In arranging the seats it is well to leave as wide an aisle as possible on the right side of the room, thus bringing the desks as near the light as possible.

Window shades are necessary to regulate the amount of light. A good arrangement is to have them roll from the center to the top, and from the center to the bottom. There is an objection to this arrangement, especially if the windows are only three feet or less from the floor, the light enters the room below the line of the eye. The windows being low, a better plan would be to roll the curtains from the bottom to the top, and in addition to the regular curtain there should be a white one to protect the room from intense sunlight and yet admit light.

Briefly stated, the following rules should govern the lighting of school rooms:

1st. All the windows should be to the left of the pupils, and well to the rear.

2nd. The top of the window should extend to the top of the room—the bottom of the window being at least four feet from the floor.

3rd. The glass surface should equal or exceed one-fifth of the floor surface.

STAIRWAYS.

The stairways are an important feature of any school building. There should be at least two stairways in every school building of more than one story, and they should be as widely separated as possible, and the building so planned that every pupil could readily reach any stairway by at least two ways.

Stairs when constructed for use of pupils, are as a rule built with the same rise of tread and width of step as those that are built for grown persons.

Stairs for a primary school should have a rise of 4½″, with width of step to correspond. For grammar schools the rise should be from 5 to 5½ inches, and for a high school the rise should not exceed 6½ inches. Many stairs have a rise of 7½ and 8 inches. The stairs should be wide and roomy. The safest ones for a school building are in my judgment, those that turn on a mid-way landing, provided the landing is at least 1½ times the width of the stairs.

SCHOOL FURNITURE.

Specialists on diseases of the eye assert that our school desks and school lighting are responsible for much of the impaired eyesight among the pupils. Physicians attribute many of the defects of the body, found among school children, to imperfect school desks. We are now in a transition period. The adjustable school desk is expected to remedy all the defects complained of in the desk of to-day. I believe that the day is not far distant when there will be no other desk used than the adjustable. While we are compelled to use the stationary desk, there should be at least three sizes in each room. Both the placing of the desk and the seating of the pupil are important.

The top of the desk should lap about two inches on the seat. In seating the pupils, the following rules should be observed:

The height of the seat should be about the same as the height of the knee of the pupil. The height of the desk top should correspond with the height of the elbow of the pupil when seated.

CLEANLINESS.

Disease lurks in the dust of the school room. In planning a school building, projections upon which dust will accumulate should be avoided.

The plan of sweeping the floors dry is not good, as the dust rises and finds lodgment on every surface of the room. Sprinkling the floor is equally as bad, for the dust is left on the floor, and rises when disturbed.

A better plan than either of these is to sprinkle the floor with damp sawdust. This, when being swept, will gather up all particles of dust, leaving the walls and desks quite free. The school rooms can be kept much cleaner when treated in this way, with one-third of the sweeping.

As often as possible the walls and ceilings should be thoroughly swept.

The desk tops, from contact with the hands, gather organic impurities. A school desk, after having been used by one pupil, should be thoroughly cleaned and re-varnished before requiring another pupil to occupy it.

From a sanitary standpoint, it is well to have this cleansing done once each term, at least.

Air should be allowed to pass freely through the room when not occupied by the pupils.

Sunlight, wherever possible, should be admitted to a school room Air and sunlight are nature's great purifiers.

Towels should be provided in such quantities that no pupil need use any surface of the towel that has been used by another.

VENTILATION.

We are all familiar with the bad effects caused by breathing impure air. The stupor, dreariness and headache, resulting therefrom, have been experienced by all. We seldom reflect upon the bad effects of these violations of nature's law.

We are prone to believe that, after we have taken a few full breaths of *pure* air, we have repaired all damage.

It is not the temporary inconveniences, caused by breathing impure air, that need be guarded against but the *permanent* effects. It weakens the constitution. It sows the seed of bad health and death. Scientists attribute to the breathing of impure air, many of the diseases we are wont to ascribe to colds.

There is not sufficient time, nor is it necessary to go into the subject exhaustively. We all know the importance of it. For a very clear presentation of the entire subject, let me refer you to a book published by Appleton—"Ventilation of School Buildings" by Morrison.

Let us consider the essentials of a good heating apparatus. Any system of heating the air, that does not, at the same time, provide for its renewal, is not worthy of consideration.

One of the best systems of heating and ventilating, (for a mild climate) that has ever been in use, is, perhaps, the most primitive—the open fire-place. A school-room with two or three open grates in it would be well ventilated and fairly well heated. One of the best school buildings in the world—the city of London High School—is, or was a few years ago, warmed and ventilated in this manner.

Exhaled air contains carbon di-oxide, watery vapor and animal secretions. The animal secretions in exhaled air are what give it the bad odor and are the most dangerous elements in it.

The impurities of exhaled air are not so light as air. It follows that the opening to remove them must be near the floor of the room. In order to keep the air approximately pure, it is found necessary to furnish 30 cubic feet of air to each person, every minute.

From 200 to 300 feet per minute is as rapidly as air ought to be admitted to a school room, in order to avoid drafts. To furnish 1500 cubic feet at a velocity of 200 feet per minute will require an opening 2½'x3'. This opening should be about 8 feet from the floor. The heating apparatus should be placed at the base of a shaft, leading to the room to be heated.

In this way we take advantage of the law that heated air rises. It is open to argument as to what the best means of heating the air should be; whether by steam coils, hot water coils or by air warmers. If the first two named are used, there is no danger of any of the products of combustion finding their way into the school room.

The latter will be found the more economical.

The air warmer should consist of an extensive surface, moderately warm, rather than of smaller surfaces highly heated.

On no account should the surface an air warmer be heated to a red heat. If it is found necessary to do this in order to keep the room warm, the heater should be torn out and a larger one put in. To obtain the best results, provision should be made to admit the air to the heater from different directions, so as to take advantage of the direction in which the air is moving. If this precaution is taken, sufficient air to ventilate the the school building, on most days, can be obtained by gravity alone. There are days on which it is difficult, if indeed, not impossible to move the air in sufficient quantity to provide for the need of 50 pupils—without a fan. A system of ventilation, to be satisfactory, must provide for a continuous and regular flow of air. The valves must be so constructed that it is impossible to diminish the flow of air. To be complete, the valves must be automatically regulated.

I have hurriedly presented some needed improvements in the construction of school buildings, but by far the most important of all these is better ventilation. In an article in the "Forum" of January are set forth conditions in the schools of Boston, New York, Philadelphia, Brooklyn and Chicago in regard to ventilation, which, if true, are a shame to our civilization.

What is needed to overcome this carelessness toward the rising generation?

Public opinion must be aroused! This can be done and honestly done, by an investigation into the condition of the air of the school room.

No law is of any avail that has not the sanction of public opinion. Many of the people are already awake to the importance of better hygienic conditions in our school buildings. When public opinion has been thoroughly aroused, it will then be an easy matter to secure legislation that will be beneficial.

What we ask is not the ideal, but the practical.

There is, on the statute books of California only one requirement in regard to the construction of school buildings, namely: That the County Superintendent shall examine and approve the plans of school buildings before the contract is let for the construction of the same.

I respectfully suggest that some such requirements as are conveyed in the following, be made compulsory and that they be made to apply to every building occupied as a school building whether by the public or by private individuals.

1. That all the light to a school room be admitted [from the left side of the pupils.

2. That the window space shall equal or exceed one-fifth of the floor space.

3. That the bottom of the windows be not less than four feet from the floor and that the top extend as near the ceiling as possible.

4. That the length of the room be to the width of the room as four is to three.

5. That the greatest number of pupils that can occupy any room for school purposes be determined by dividing the area of the floor in square feet by 20.

6. That the length of the room be exposed to the east, the west or the south light and that the windows be placed in the side so exposed as nearly to the rear of the pupils as possible.

7. That the ground floor of the building be covered with concrete.

8. That apparatus be furnished, sufficient to supply each pupil with 30 cubic feet of air, properly warmed, every minute.

These, with minor propositions, regarding stairways, height of ceiling and color of walls, being enacted into law, would make it impossible to construct a school room in California, that would act as a hinderance both to the mental and physical development of children.

HYGIENIC IMPROVEMENT WITHIN REACH OF US ALL.

Lucy M. Washburn.

"If ye know these things, happy are ye if ye do them." Do the requirements set before us this morning seem beyond our reach? As we compare what we have been told that school houses ought to be, with what, alas, they are, and think of the indifference of trustees and public, does it seem to us that we might as well be told to go live in palaces?

Nothing that is absolutely essential is entirely out of the reach of intelligence and energy. If we set ourselves with the earnestness of conviction to achieve even small improvements in the right line, the way will open, each step leading to another. It is of the small steps possible to every teacher, that I wish to speak to-day.

But they are possible only to the teacher fired by conviction; once more, a few words as to the urgency of the case. Civilization will indeed kill itself if by the neglect of this physical factor it allows its highest products to die out. We all recognize certain great gains within the last century, due to enlightenment as to the causes of disease and health, and some corresponding sanitary reformation. Certain great plagues no longer sweep over continents unchecked; vaccination has subdued small-pox, quarantine keeps out cholera and yellow fever. Specific precautions against these, together with sewers in our towns, and windows rather than the loop-holes of mædieval fortresses in our houses, have secured, especially in such countries as England, where the reformation has been greatest, a marked gain in the average length of life.

Yet when we come to examine the statistics, some startling facts give us pause. The death-rate, so largely decreased as to certain causes, has increased as to others, and forms of break-down not known of old, have arisen. We find this in two main directions. First:—Nervous diseases are on the increase. Insomnia, that direful word but too familiar, is a a new word not found in Webster's Dictionary for 1860; so is nervous prostration a new phrase. Insanity is increasing, as well as minor nervous diseases. Second:—Consumption, that arch destroyer of the human race, although we know so much more than formerly about its nature and prevention, is also on the increase. Already it causes not less than one-sixth of the deaths from all causes together. Examining into the causes of these ominous facts, we find two: first, the increasing strain of civilization; second, the tendency to city crowding and indoor sedentary occupation. The saddest feature is that these are causes apparently inherent in advancing civilization, and that they attack those on whom civilization has spent most—the educated, the brain-workers. It looks sometimes as if society would have to be recruited from below, and this means a waste of its gains and a check to any high final attainment.

Now what remedy is there? Only one: that intelligent effort *in these lines* shall increase faster than the evil it is to meet. Legislation will not lead; it is not a source of power, but only a form of its application. It lags ever behind the public opinion, which is its source. Public opinion, then, is the true power; and this must be educated. Now to me, the most unhopeful feature of all is, education as yet does not usually mean education in this most vital matter; that even high culture in other lines may co-exist with astonishing mædieval barbarism here, that it is precisely in our schools—yea, in our universities—that some of the very worst of these conditions most prevail.

Is this an over-statement, a false charge? Let us see. What have we found to be the two great factors in diminishing vitality? Indoor, sedentary, ill-ventilated living, and nervous strain; and these two are the crying evils of schools. Instead of being centers of light, most schools are in these very things centers of darkness.

Mr. Duncan, the wisest of missionaries, in building school houses for his Alaskan Indians, retained their old wide roof-opening over the central fire, because, he said, the Indians were "not civilized enough yet to use ordinary window openings without danger." How often, as I have visited schools all the way from kindergarten to university, have his words come back to me—"Not civilized enough—not civilized enough!" How have I seen in university recitations, one large class of students after another occupy a de-vitalized room, until some panting pupil interrupted the professor to beg for a breath of air; and then have seen the professor fly to the nearest window—probably the one on the windward side,—and fling it up, not down, pouring the keen winter blast directly upon the over-heated throats of his pupils, until in self-defense they begged deliverance from this worse evil of the two.

Then at the other extreme of the educational scale, I have visited some mountain district school, taught by one of my own former pupils, and I found every crack closed against our delicious, healthful, California mountain air, while the poor pupils and teacher alike, unaware of the source of their stupidity, struggled with red faces to make more creditable recitations. Then have I resolved never again to help send forth into the public schools, teachers who were not trained in habits of better care of their school rooms, and who would not in turn train their pupils to the demand for fresh air.

For the lingering barbarism that gives us not only crowded theaters of heedless pleasure seekers, but also churches and lecture halls steaming with foul air, and leads us to submit to such injury and indignity, I believe can be done away with only by a public opinion trained to better things in the common schools. We get what we demand: we demand what we have learned to appreciate.

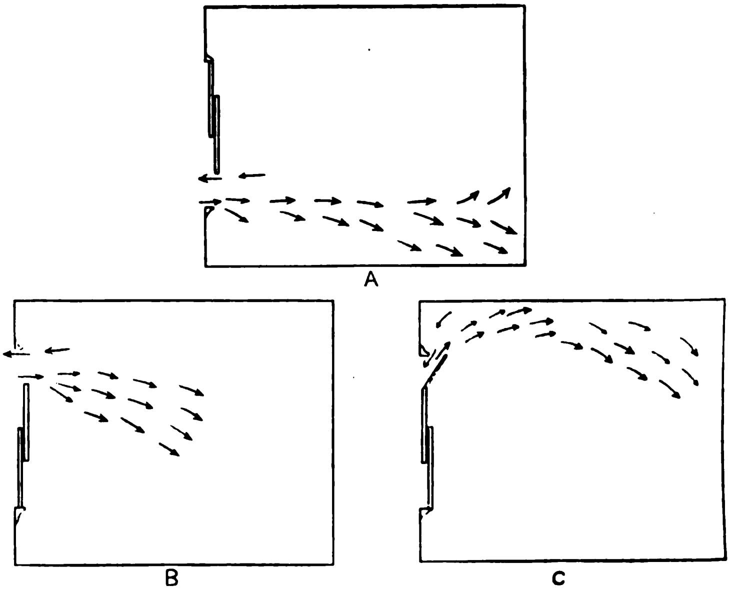
Now what can be done by the public school teacher to bring about this better state? We have heard how schools *should* be built; we know how those most of us have to teach in *are* built. Are we helpless? Not so. In three ways we can help to bring about a vast reform.

First.—We can *use* whatever aids we already have, intelligently and faithfully. How few teachers make this a primary object! They wait until conditions are bad, instead of providing beforehand that they shall not become bad. Therefore the change required is violent, and a violent change is necessarily harmful. How few see to it that their school room is aired out immediately after pupils leave it, at recess, at noon, after school, so that each short session shall begin with the freshest, best-sunned air procurable. How few take careful note of the position of each window, and let down those, and those alone that are away from the winds, and not in line with any other open door or window; choosing with care when feasible, those on the sunny side, in front of pupils, rather than at the rear, and adjusting the opening to each shift of the weather. Yet such draftless, selected openings, though inadequate for rapidly removing vitiated air which has been carelessly allowed to accumulate, will if adjusted before the entrance of pupils, keep air fresh to start with, pure to a degree that can be realized only on faithful trial. School rooms thus managed, I say from experience and careful observation, are from one hundred to five hundred per cent. better than school rooms subject to the ordinary careless neglect of teachers. Is this an effort to be added to those already over-weighting the teacher, trying at the same time to teach the lesson, preserve discipline, and watch the minds of her pupils? A teacher must learn this command of more ends the one most conspicuous. And in this case, the increased ease with which pupils study and recite, the cheerfulness assisting discipline, will save more effort than the good ventilation has cost. The school room is another world for both teacher and pupil.

Second.—I wish to urge the *training of the pupils* in similar care and success in providing fresh air. This is the only thing, I think, which bids fair to make them, as they grow up, another public than the ignorant and careless one of our generation. It has been my own practice for some years to give my pupils each a careful training in why we need plenty of fresh air, and why certain windows open will injure us by drafts, and certain others will give the air without the evils; then to put each in charge in term—a day or week at a time—of the securing this fresh air in the school room. It is a part of the school exercise, a part to be studied and performed as much as any other lesson, and placed foremost to their credit when well done. One who has never tried it will be astonished to find with what spirit pupils can be led to take this responsibility; how much pride they can be led to take in its proper performance, and how they gain in intelligent choice as to what to do. When they see that knowledge and judgment are required, and are estimated at their true value, credited beyond any single problem, and far beyond any memory lessons, they respect the charge, and look with disdain upon ignorance and bungling. And when they find that faithfulness here is credited even more highly than in the acquisition of book lessons, they have learned a deep lesson of public duty, of work of each for the good of all, that will make them better citizens all their lives. Ah, if we can get a public so trained in youth, what may we not hope for in the way of cleaner cities, renovated slums, open parks, enforced quarantine, better buildings—sanitary progress in all directions, and corresponding public health and character.

Third.—When we have thus made the most of what appliances are furnished us, we can with better grace and greater force urge upon school trustees the adding of simple appliances which will make the task easier and more effective It is surprising what good results may be had for a little money, and how often the teacher who knows exactly what she wants can secure it.

Simplest, most attractive, and a wonderful help, are guards at the top of the windows, consisting of an upper transom-like division of the window, opening inward by a hinge at the lower edge. Air coming in, thus directed upward, has little tendency to fall upon the pupils' heads.



A. Room with window raised. Incoming current of cold, heavy air directly against seated pupils, and violent for lack of diffusion.

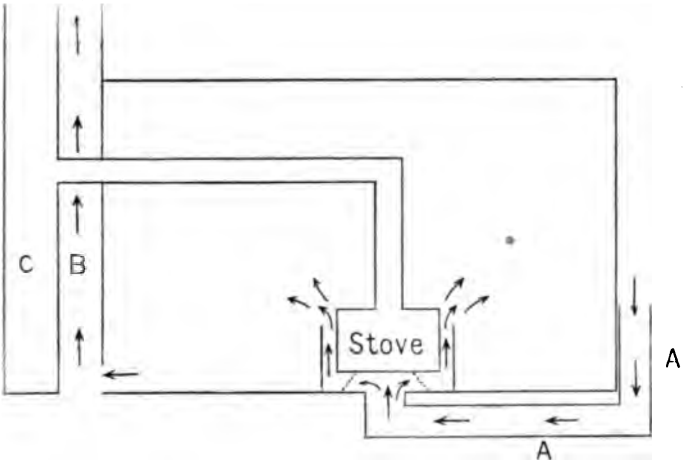
B. Window lowered at top. Incoming current above pupils' heads, but by its weight tending to fall upon them, somewhat diffused before touching their heads.

C. Window open at top, and incoming current deflected upward by guard, so that its tendency to fall before diffusion with the warm air of room is almost entirely overcome.

The main buildings of Stanford are ventilated in this way. So slight is the expense and so attractive the effect, if the window-transomes be made a little decorative by small panes or color, that the trustees of almost any school house in process o. erection, from a country single room to a town school, can be induced to put them in. Still more effective are they if small triangular guards at their ends stand out into the room. These may be made, pretty, though cheap; and pegs in them for the window to rest against save all complicated window openers.

No one who has not tried it can realize what their simple addition to a school room or living room is worth.

Of course the ideal thing in cold weather, even that of our California winter, especially in mountain regions, is to have all air warmed before it is admitted. For country school houses of one or two rooms, no furnace is necessary for this ; a device used to advantage in many New York schools is ample. It consists of a zinc jacket surrounding the stove, or all but the front of it ; a pipe running from the side under the house, entering this jacketed air-space through the floor, so that rising against the warm stove it will be heated before diffusing through the room, and an outlet at the bottom of the room into an air shaft built alongside the chimney, so that its warmth will cause an effective up draught for the foul air. How many a country school-teacher could secure this inexpensive addition when a new school house is building, could she show the trustees just how to construct it, and that it will save far more than its cost in fuel, by disposing of the *cold* foul air instead of newly warmed air, as windows do.

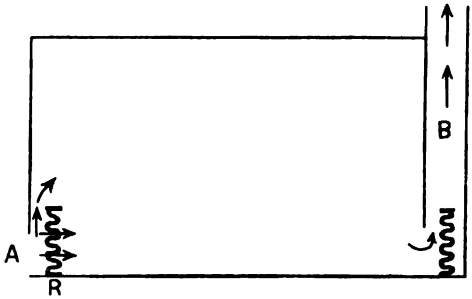


A. Inlet pipe to jacketed air space around stove.

B. Air shaft for exit of foul air; warmed by contact with chimney.

C. Chimney; which, however, is alongside of air-shaft, instead of beyond it as in the drawing.

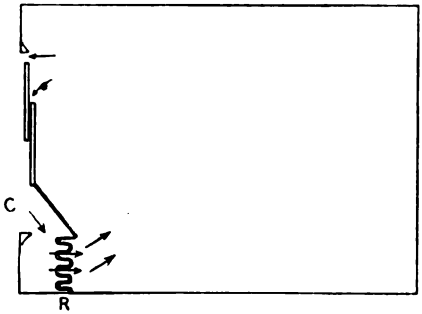
As to the building of town schools, teachers too often have even less to say than as to country schools. Yet I have known the advice of one who could present definite plans to prevail. And where steam radiators are to be used, how easily may these radiators be set against outer walls, openings through which bring fresh air against the radiators, *boxed* well at the sides and bottom to prevent the air from spreading before it is warmed. Such a boxing in of air I have known to be added to radiators near the windows in an old school building. The window was raised a few inches into a downward sloping box built to the radiator. The healthfulness and comfort of the room were secured, as by a revolution, by this simple addition, costing not over three or four dollars.



R. Steam or hot-water pipe "radiator," near wall, with air inlet (A) against it; air thus heated before diffusing into room.

B. Outlet for foul air, into shaft warmed by another radiator.

If teachers, then, will do these three things:—first, *use* to the very best advantage whatever appliances for ventilation there are in their rooms already; second, *train pupils* in faithful, intelligent use of these means, and third, watch for opportunities to secure the cheaper aids to ventilation, and use these also effectively when once in—if they will do these three perfectly practicable things, they will in a few brief years educate the public to better things. Then demand will create a better supply. The best fan ventilation will come to be the expected thing in the great city school buildings, so that it need no longer be said that factories are ahead of schools in these intelligent and efficient arrangements. And the smaller schools, with simpler appliances such as I have sketched, will be nearly as effective for their smaller numbers; and perhaps can even better train the future masters and mistresses of homes to



C. Air admitted through raised window through downward-sloping box to and through radiator R, thus warmed.

Window slightly opened at top and space between upper and lower sash, then act as outlets for foul air.

make them homes indeed, the abodes of health, and hence of cheerful, effective living.

I have devoted my short time to presenting in clear detail how one of our greatest dangers may be overcome. It is easy to see how similar intelligence and earnestness will deal with the other unhealthful features of indoor life, and with that other great twin problem, overwork and nervous strain. The two dangers and their remedies go together. We must wisely select and modify the amount of work demanded of pupils; but as they can accomplish ten-fold with health and pure air, in killing one giant we have half disarmed his brother who fights alongside.

Indeed, the evils that are so formidable, shadowing and dogging the progress of humanity, are not beyond its overcoming. Civilization will then be a pure triumph, and to its progress we can set no limit. But let us beware of thinking it can come to us while we idly wait; it comes only as we conquer its conditions.

HYGIENE IN EDUCATION.

PROF. WOOD.

Every child, as an organic being, is entitled to the opportunity for the best and fullest life possible to him. Every child, as an organic being, in civilization, is entitled to the fullest, best life which civilization can make possible to him. These assertions may seem like platitudes unless we stop to consider that civilization, imperfectly intelligent, may not only fail to give the child the best civilized life, but may even in the process of civilization deprive him of some of the essential and desirable realizations of life which would have been his under rude and primitive conditions. In such a failure, our more or less intelligent civilization may be unconscious of the harm done, but the effect will be as certain as if conscious force had been directed to the same end. The world does not, as the tramp claims, owe every man a living, but the civilized world owes every child a training which will fit him for life. Further it is the impersonal duty of modern education and of the State to provide for the child that part of his life training which he does not get in his home or elsewhere. This again may seem a platitude if you agree with the statement at all, but from the standpoint of hygiene the conception of life and of the training for it usually held by the educator seems partial and very incomplete; the purpose of education seems narrow, and the methods of education imperfect for the recognized and even, and thoroughly inadequate for the training for life in its completeness.

It is the function of your committee in the session of this morning to plead the claims of Hygiene as a department and method of education. Hygiene is that part of education which has to do with the improvement of health. Health is the condition of an organism which is thoroughly sound and perfectly adapted to its life and works.

The notion of education and of hygiene in education will depend upon the conception of the life of the human being. The popular idea of human life in these days is far too narrow, and the idea of education is narrower still.

It is not all of life to think, even though fine thinking is the best expression of life. Thought is the flower and action the fruit of the tree of human life, but in our haste to realize the flower and fruit we forget, or neglect, or injure the root, trunk and branches.

Mind is a function of brain. The brain is an organization of nervous tissue, dependent like any other tissue, and more directly and vitally than any other tissue, upon the human organism for life, for health, for power; dependent again upon the human body for an instrument of expression, a means of making thought manifest to sentient beings. If intellectual training is the purpose of the school or university, as most educators claim, then it must be insisted that intellectual training includes the training of the being which does the thinking, the machine which makes thinking possible; and it is necessary to keep constantly in mind the fact that the health and hygiene of the nervous system—the thought-mechanism, involves the health and hygiene of the whole body.

It is not possible to suggest the intent and content of human life in a few words, but I have found it helpful to keep in mind that the schools, striving to accomplish in education what is not done elsewhere, should first train the child as an organic unit, the connecting link between the last generation and the next. The child of to-day will inevitably be the parent of a few years hence. Whatever else he may not hand down, he will certainly transmit certain limitations of human life and health and determine to a wonderful degree the vital power and chances of his offspring.

And yet as a race, and for the most part, we live to-day as if it made no difference what the next generation should be, or whether then there should be any. Children are trained for intellect; they should be trained also and first for parentage, and their intellect would then be all the better for it. Education to-day draws for intensity of life, but not for its preservation. If this race of nineteenth century civilization is to continue upon the face of the earth, intelligent education of the future must train the child for all his life work.

From the cradle, indeed, long before he is born, he must have the consideration and care which belong to a being in whom is wrapped, through inheritance, the best results of the world's slow but marvelous development, and in whom rests again the momentous duty of transmitting worthily to his own child all the precious wealth to which he is heir. The mature teacher (and there should be no other) must train the immature being entrusted to his care not for the mere achievements of to-day, but for the responsibility and work of maturity. Normal growth must not be disturbed by any controllable influence. Organic health must not be sacrificed to any other end, not even promotion or preparation for college. Other things being equal, that child that has been most carefully trained for the life of a healthy human animal will have the best intellect and will be worth the most to the world in every possible way.

In the second place the schools should train the child as an individual human being. This is the superiority of the child over the plant or animal, his claim to self-conscious individuality. But the teacher must remember that the dependence of a self-conscious being upon his bodily organism is in some respects more precarious than that of the tiger or the mouse. Difficulty of life is the penalty for complexity of life. In his individuality the child is to be trained into character and strength. But again it must be remembered that he is first an organism and then an individual, and that if he is not physically sound and strong he can never permanently be much of anything. "The trouble is," writes Dr. G. Stanley Hall "that few realize how dangerously near weakness often is to wickedness." It usually requires not only high motives but also a healthy and well-trained body to make a good, efficient man or woman. Education trains for intensity of life, but not enough for breadth, for symmetry, for individual power and beauty.

In the third place, the schools should train the child to be a successful social and industrial factor. And this is the demand which modern education recognizes most. This determines the course of study; this emphasizes and forces specialization. This is the expression of our boasted civilization, and it is good if properly correlated to the other needs and claims of the individual. Too frequently this is almost the only sphere for which the schools train the individual. Our school curriculum is for the most part and solely a response to the social and industrial demands of the times. These demands are the expression of that development in the world which we call civilization. Far be it from me to decry that which stands for the world's progress, but this civilization which is the result of man's mind and effort becomes to the individual an impersonal, irresistible force, ruthless in its demands and not infrequently destructive in consequence. In this civilizing process man has come to know all knowable things better than himself. And, relatively to all the things of value to man in the universe, man, as an organism—as a mature human being—is least understood and fails most of proper care and consideration. The old Greek proverb, "Know thyself"; has more force to-day than ever before. Specialization is the watchword of our industrial age, and specialization is the method of the schools, yes, very frequently even of the kindergarten.

The child is specialized before he is fairly generalized, organized or humanized. More concretely, from the very beginning of education much time is given to the forcing of those tissues and faculties which are accessory and should be developed later, while the body as a whole, the fundamental muscles, nerves and organs, are neglected, and so the superstructure fails of its foundation, and frequently abnormality and disease results. Again, the words of Dr. G. Stanley Hall: "The school focuses an enormous strain upon the few tiny tongue and pen-wagging muscles. Most of the muscular system, which is the organ of the will and has done all man's work in the world, is allowed to grow flabby, and thus the chasm between knowing and doing is widened and the will is weakened." "The result of all these dangers is seen in the loss of weight on entering school, and the growth of diseases of eye, spine, vital organs and throats, headaches and the far more subtle nervous disorders which increase with advancing school years."

And why does the school focus this enormous disease-producing strain? Because life, our civilized life of to-day, demands that the educated person shall be a specialist; and the educator, short-sighted at least, if not also ignorant, swayed by the spirit of utilitarianism or by the demand for immediate results, allows or produces the strain upon the child. And then the disaster follows. Education must come to understand that only a sound, whole and strong human being can specialize successfully or for any length of time, and that the making, the human being sound, whole and strong, if he be not already so, is the first and most important duty of the school. Training which neglects the fundamental needs of the child for technical skill or immediate end, not only deprives the child of organic health and strength, but by so much diminishes his chance of real power and effectiveness in specialization, at which our whole education aims. As a simple financial investment education is unprofitable when, through the ruthless strain and pressure the boy or girl is turned out a weakling, invalid or wreck, to be a burden to himself, his friends and perhaps the community and State. When children are trained as carefully for life as horses are for the track, education will be doing what it should have done long ago.

Those who would have hygienic reform in education often wonder why it is so difficult to effect changes which seem of such vital importance. Outside of the general inertia which impedes all change two reasons suggest themselves. First, the trend of effort in civilization has been objective and away from the study of man's intrinsic conditions and needs, and so to-day, the various values of life in popular estimation are distorted and out of proportion. In the race for money, position, social success, fashion, houses, lands, books and pictures, man is forgotten and mere matter and things overshadow the value and dignity of human life. In education there has been this same tendency. The thought of teacher and pupil is intent upon objective achievement, lessons, marks, diplomas. There seems to be no time for anything else, but fundamentally the teacher does not know that anything else deserves attention, and wakes to the organic, intrinsic and essential needs of the child, if he wakes at all, with much astonishment. Within a few years some have recognized the importance of making a more careful study of man, and already something is being done. Again, the race is to-day in a transition stage in intellectual development. Instinct as a mental faculty is giving way to intelligence and reason, and in the process of change both are imperfect. Instinct is very imperfect, a degenerating faculty frequently misleading the individual who thinks that he will naturally or intuitively do certain desirable thing that he does not do. Intelligence and reason are also imperfect but developing faculties, and will, when sufficiently trained, be as safe a guide to man in civilization as instinct is to the tiger in the jungle. In this transition stage however, man must not be misled by a deteriorating instinct, nor by impulse substituted for it; but human intelligence and reason must be turned toward man himself, for his own study, preservation and care, and if he understands that there is no force to direct him save human intelligence and reason he will be more apt to get along. It may make us properly humble to remember that although endowed with the highest possibilities of all living creatures, man is of all organisms most badly adapted to his life conditions; man is organically most unsound of all the orders of animals.

The importance of a sufficient recognition, teaching and practice of hygiene in education increases every day. While the process of civilization brings so much of value to the race, and in some respects makes living easier, it also makes the healthy life of the individual more arduous. With invention the human environment becomes more complex, and human adjustment to it, which is necessary to existence and health, more difficult. Modern civilization is not an unmitigated blessing.

The claims of hygiene in education need not be argued against those of any other study. That which vitally affects the health, life and power of the child cannot be brought into conflict with any other factor of education. The only rational way is to provide first for his vital organic needs, and then give him whatever else time and opportunity permits.

Again, I quote from Dr. G. Stanley Hall, that wise and helpful friend of children: "A ton of knowledge bought at the cost of an ounce of health, which is the most ancient and precious form of wealth and worth, costs more than its value. Better Tolstoi's kind of liberty, or the old knightly contempt of pen and book work as the knack of craven, thin-blooded clerks; better idyllic ignorance of the invention of Cadmus, if the worst that the modern school now causes must be taken in order to get the best it has to give. Sooner or later everything pertaining to education, from the site of the building to the contents of every text-book and the methods of every branch of study, must be scrutenized with all the care and detail at the command of scientific pedagogy, and judged from the standpoint of health. What shall a child give in exchange for his health, or what shall it profit a child if he gain the whole world of knowledge and lose his own health?" Enough of the science and art of hygiene must be incorporated into education so that the child may have as much of organic soundness and health as is possible, and may know how to preserve and hand down as good a quality of life as has been his. There should be enough of hygiene somewhere in the training of the young so that, so far as health may serve him, man as an animal may not be ashamed to look any other order of animals in the face; that he may as an organism be fitted for life and for the perpetuation of life; that man, as an individual self-conscious being, may realize his best self in character, in moral worth and spiritual power; that man as a social and industrial being may be able to succeed steadily and enduringly in the competition of everyday life.

Practical hygiene in education means this—that the whole environment called school, which includes everything from grounds, buildings, rooms, lighting, heating, air, color, school furniture, books, pictures, to the very teacher, shall be favorable to the best and healthiest growth and training of the child; and that the most favorable environment shall be secured regardless of expense. Is the welfare and health of forty children, or of one child even, to be balanced by the community, or the State even, against a few more cents, a few more dollars or a few more hundred dollars, to be expended for better cleaning of the school building; for more hygienic school desks or seats; for better papers and printing in school books; for the best system of heating and ventilation obtainable? Financial economy is converted into criminal waste of child life when applied to the vital details of school conditions.

Again, hygiene in education means that the activities of the child shall be so controlled with reference to age and individual condition that growth shall be perfect and unimpeded, and that the faculties shall be trained and developed in order, in symmetry and in power. Not only does the child fail of what he might have become, but not unfrequently positive disorder and disease is produced by ignorant, unscientific methods of training, and these largely through force and over-pressure. Children are sent to school too young; the periods of school work are too long. Too early by far the child is sent home from school with work to do in the evening. From the beginning of school life strain is brought too much on the accessory, the specialized nervous and muscular mechanism, through eye, tongue and finger activities, while from the very beginning of school life there is too little activity of the fundamental muscle and nerve centers; the back, abdomen, chest and shoulders become weak, or stay weak, and there is not enough of foundation to support the superstructure. From one-third to one-half of the active time of young children should be devoted to large movements having a definite purpose which is well understood by the teacher. Plays and games should be carefully chosen and directed. Gymnastics are too frequently unworthy the name; but gymnastics are of great importance, especially in the grammar and high school grades, and they are in the future to take a definite and dignified place in the school regime. It is the province of the teacher to train the child; not primarily to teach subjects to him. The child should be measured, tested and examined on entering school and at regular periods thereafter. I quote from Prof. Serge of the University of Rome: "The practical pedagogist ought to know that the child is in a certain state of bodily and mental development. Scientific experience gained by anthropometric and physiological methods must be the basis for scientific pedagogy." The teacher must understand thoroughly the animal organism which is being trained. The child whose hearing is impaired must not be considered dull or mentally defective. The child who has some peculiarity of temperament must not be maltreated. He must be understood and given a fair chance. I illustrate at random. It is not an easy thing to teach well; it is as difficult work as there is in the world, and as important.

Once more, hygiene in education means that the child should be taught how to care for his health, his body, his life. He should be taught carefully, clearly and truthfully, according to his age and individual responsibility; in general and in detail he should be taught the laws of life and health, and how he should obey them. He should be taught plainly all that he needs to know. I do not mean that human anatomy and physiology should be taught in the lower grades, or that vivisection is ever necessary in the public schools. We are discussing not science teaching, but health instruction; as much of anatomy and physiology as the child needs to know in order to do his part well in running his own life mechanism. He should be taught health, and not disease, and a high ideal of human manhood and womanhood should be presented to him.

Some of this health teaching can be done in class. Much of it must be done individually. It must all be done scientifically, and, let me say, again, sufficiently. "Throughout all it should, then, never be forgotten that the *summum bonum* is health."

The foregoing papers were discussed as follows:

Prof. Dresslar:—Many things have been suggested here this morning that we ought to go home and do. Let us study the children more in relation to health. Let us, for instance, make a study on fatigue and its moral results.

Let us make a study of the comfort of the child. The back ground of one's mental life is in the house and its surroundings. Let us have joy there. Let the girls whistle if they want to. Let's insist on ourselves and be gay and happy.

Prof. Babcock:—The subjects discussed this morning are of great importance. We hear about stupid children. When do they become stupid, and how? In the first year at school they are alert and bright. In two or three years after, they become careless, listless and inattentive. What is the matter? They have been breathing bad air. Teachers do not understand the value of air and light. Every half hour the doors and windows should be opened, and the children allowed to stand while the room is washed out with fresh air.

An examination of children in the Boston schools, lately, disclosed the fact that of 9000 in attendance, 5800 were sick with diphtheria, measles, cough, mumps, itch, etc. We should watch the health of the pupils.

Col. Edwards:—I am glad that we of Oakland are not alone in agitating matters of hygiene.

The Government sent out from France, three years ago, an observer who said: "Our young men in France get up late. After a meal of coffee and bread they amuse themselves at games, eat dinner, and dance all night. I am sent here to learn what to do for the physical education of young men. The health of French young men is to-day a menace to France." A lesson is to be read for us in this.

Saturday Afternoon.

The Association called to order at 1.30 o'clock.

The Treasurer's report being called for was submitted and adopted, as follows:

OAKLAND, January 4, 1896.

To the officers and members of the California Teachers' Association, I submit the following report for the year ending January 4, 1896:

RECEIPTS.

1894—	
Dec. 29—Cash on hand	$260 21
1895—	
Feb. 23—J. P. Greeley	3 00
Mar. 9—W. F. Hall	4 00
Nov. 26—Gunn & Co. advertisement	20 00
Nov. 29—Houghton, Miffin & Co., advertisement	20 00
Nov. 29—Jones' Book Store, advertisement	7 50
Dec. 19—Sale of proceedings	3 00
Dec. 31—Membership fees	12 00
1896—	
Jan. 2—Membership fees	179 00
Jan. 2—P. M. Fisher, advertisement	15 00
Jan. 3—W. F. Purnell, advertisement	7 50
Jan. 3—American Book Co., advertisement	15 00
Jan. 3—Membership fees	303 00
Jan. 4—Membership fees	143 00
	$992 21

DISBURSEMENTS.

1895—	
Aug. 26—Anna C. Murphy, printing	$ 8 25
Nov. 22—Anna C. Murphy, cash advanced	5 50
Nov. 22—Pacific Printing Co., printing proceedings	232 05
Nov. 22—W. H. Raymond, cash advanced, copying Le Conte's lecture	6 50
Dec. 14—Anna C. Murphy, cash advanced	22 81
Dec. 21—Pacific Printing Co., printing	20 25
Dec. 21—Anna C. Murphy, cash advanced	2 00
Dec. 21—Bessie G. Haslam, cash advanced	1 00
1896—	
Jan. 3—Pacific Printing Co., printing and express	10 45
Jan. 3—Anna C. Murphy, cash advanced	3 75
Jan. 3—J. W. Linscott, printing and cash advanced	18 50
	$331 06
Balance	$661 15

RECAPITULATION.

Cash on hand	$661 15	
Due from D. C. Heath, advertisement	10 00	
		$671 15

There has been a marked advance in the financial condition of the Association, owing to the fact that the membership has been increased materially for the year ending January 4, 1896.

The membership to-day numbers 641.

The funds have increased from a balance on hand of $260.21 December 29, 1895, to a balance of $661.15 January 4, 1896.

Respectfully submitted,

BESSIE G. HASLAM, Treasurer.

The following is an itemized summary of the purposes for which the foregoing was received and expended:

Receipts—	
Carried from 1894	$260 21
Membership fees	647 00
Advertising in proceedings	85 00
	$992 21
Expenditures—	
Newspapers	$ 45
Copying	6 50
Printing proceedings	232 05
Expressage	2 25
Freight	80
Stamped wrappers	5 11
Postals and printing	5 60
Stationary and printing	10 25
Programmes	30 70
Circulars (Council of Education)	18 50
Telegrams	1 30
Stamps	17 55
	$331 06
Balance	$661 15

The Secretary, at the request of the President, announced that the Executive Committee of the Association had elected as members of the Council of Education, J. W. McClymonds, Oakland; James A. Barr, Stockton, and Washington Wilson, Chico, to take the places of members whose term had expired in '95; and also F. L. Burk of Santa Rosa, to take the place of J. G. Kennedy of San Francisco, deceased.

The following report of Committee on Resolutions was received and adopted:

To the California Teachers' Association:

Your Committee on Resolutions recommend the adoption of the following:

Resolved, That we express our keen appreciation of the hospitality extended to us by the city officials, citizens and teachers of Oakland, and of the continuous and successful efforts of Superintendent McClymonds and his assistants, as well as of all committees who provided so well for our entertainment.

Resolved, That we recognize with great satisfaction the very general participation on the part of our teachers in the investigation of the problem of our elementary school curriculum, as inaugurated by the State Council of Education. We believe that the effective prosecution of this inquiry during the coming year in every county and city of the State is greatly to be desired.

Resolved, That the Council be and hereby is authorized to print and distribute gratuitously to the teachers of the State, the reports of its committees on the Course of Study, on High School Certificates, and on Manual Training, and that the Council be authorized to draw upon the treasury for $200, or such portion of that amount as may be required, for necessary printing and postage.

Resolved, That the Executive Committee be authorized to pay $25 toward defraying cost of transportation of the Manual Training exhibit, and $13.75 for printing the abstract of the report of the Committee on Manual Training.

Resolved, That the Council of Education be requested to continue the inquiry and work begun by its committee, to the end that legislation may be secured to facilitate the introduction of Manual Training in the schools of California.

Resloved, That we believe that the further discussion of the report of the Committee of Fifteen, so ably begun by Professor George H. Howison, is of vital importance to the teachers and schools of our State, and we recommend that teachers make a more careful study of the report, and that one session of the next Association meeting be given to its further consideration.

Resolved, That the California Teachers' Association extend to the National Educational Association an invitation to hold its meeting for 1897 in the City of Los Angeles.

Resolved, That there should be a standing committee of the Association on school hygiene, in order that this subject may be kept under consideration and investigation. And that after a reasonable time, a definite recommendation may be made to the Association, relating to the place of Hygiene and Physical Culture in the school curriculum and the necessary preparation for these subjects in the professional training of the teacher.

Respectfully submitted,

J. A. FOSHAY,
G. W. BEATTIE,
J. B. HICKMAN,
WASHINGTON WILSON,
JAS. A. BARR,
Committee.

It was moved and carried that $100 be set aside for the Executive Committee to use in recompense of the services of the secretaries, and also $25 for the services of the treasurer.

The business of the Association being finished, President Barnes introduced President David Starr Jordan, of Stanford University, who on behalf of the California Science Association, (adjourned to meet with the Teachers' Association for the afternoon) delivered the closing address of the session.

THE STABILITY OF TRUTH.

PROF. JORDAN.

After a discussion of the views of the Marquis of Calisbury, Mr. A. J. Balfour and Professor Heackel as to the relations of science and philosophy, Dr. Jordan took up a discussion of the positive side of the claims of science, and the following is an abstract of his remarks:

This of course brings us to the question of definitions. If knowledge and belief are of like rank, both must rest on science, and the results of philosophy must come to science as hints or suggestions as to future lines of research.

If Knowledge implies stability and belief does not, the relation of the two is also clear. In that case belief would be a word of light meaning, expressive of whim or the balance of opinion. Such weight as it has would be drawn from its association with prejudice. But in this case belief would cease to be a factor in human life. It would be the pretence of knowledge as compared with knowledge itself. Along its path life cannot march with courage and effectiveness. One ought not to believe where he cannot trust.

As science goes wherever the facts lead, so science must stop where the facts stop. It cannot add to its methods the running high jump, nor place the divining rod with the microscope and crucible among its instruments of precision. Beyond the range of scientific knowledge extend the working and the unworkable hypotheses. Beyond the confines of all these extend the universe of the mind, the boundless realm which is the abode of philosophy. None should better realize these distinctions than men of science. The primal motive of science is to regulate the conduct of life. This is in a sense its ultimate end, for *it is* the first and the last function of the senses and the intellect.

If science has any message to man it is expressed in these words of Huxley: "There can be no alleviation of the sufferings of mankind except in veracity of thought and action, and a resolute facing of the world as it is, with all the garment of make-believe thrown off."

"Still men and nations reap as they have strewn." The history of human thought is filled with the rise of philosophic doctrines, laws and generalizations not drawn from human experience and not sanctioned by science. The attempt to use these ideas as a basis of human action has been one of the most fruitful sources of human misery. A legitimate argument against any such conception is that its acceptance makes for death not life.

And now we may turn for a moment to the positive side of scientific belief.

I was walking not long ago in the garden with a little girl to whom I told James Whitcomb Riley's story of the "goblins that get you if you don't watch out,"—a story supposed to be peculiarly attractive to children. "But there isn't any such thing as a goblin," said the practical little girl, "and there isn't ever going to be any such thing." Mindful of the arguments of Berkeley and Balfour, I said to her in the vein of philosophic doubt: "Maybe there isn't any such thing as anything, Barbara?" "Yes, there is," she said, "such a thing as anything," and she looked about for unquestioned reality, "there is such a thing as anything; there is such a thing as a squash."

And in this conclusion of the little girl, the reality of the objective world, the integrity of science and the sanity of man are alike bound up. And for its evidence, if we are not confined to Balfour's argument in a circle, we must look to the facts of organic evolution, of which the existence of man is a part.

Each living being is a link in a continuous chain of life, going back in the past to the unknown beginnings of life. Into this chain of life as far as we know, death has never entered, because only in life has the ancestor the power of casting off the germ cells by which life has been continued. Each individual is in a sense the guardian of the life-chain in which it forms a link. For each link is tested as to its fitness to the conditions external to itself in which it carries on its functions. Those creatures unadapted to the environment, whatever it may be, are destroyed as well as those not adaptable. And this environment by which each is tested is the objective universe. It is the world as it is. It is not the world as the creature may imagine it. Is is not the world of philosophy. It is the world of science. Nature has no pardon for ignorance or illusions. She is no respector of persons. Her laws and her penalties consider only what it is, and have no dealings with semblances. By this experience we come to know what reality is, that there is an external world to whose demands our senses, our reason, our powers of action are all concessions. The safety of each chain of life is proportioned to adaptation of its links to these conditions. This adaptation is in its essence obedience. Its obedience is conditioned on its knowledge, on its will to respond in action to sensation or knowledge. Sense perception and intellect alike stand as advisers to its power of choice. The power of choice involves the need to choose right. For wrong choice is punished with death. Death ends the chain of which the creature is a link and the life of the world is continued by those whose choice has not been fatal. Severity of condition and stress of competition is met in life by the survival of those adequate to meet these conditions. Thus "in creatures sore bestead by the environment" when instinct and appetite fail, reason rises to ensure safety. At last with man reason comes to be a chief element in guiding the choice of life. With greater power to know and hence to choose safely, greater complexity of conditions become possible, and the multifarious demands of modern civilization finds some at least, who can meet them fairly well. To such the stores of human wisdom must be open. To others right choice in new conditions is possible only through following the footsteps of others. The multitudes of civilized men, like the multitudes of animals, are saved to life by the instinct of conventionality. The instinct to follow those whose footsteps are secure is one of the most useful of all impulses to action. In the same connection we must recognize authority as a most important source of knowledge to the individual. But its value is proportioned to the ability of the individual to use the tests wisdom must apply to the credentials of authority. But instinct, appetite, impulse, conventionality and respect for authority all point only backward. They are the outcome of past conditions. "New occasions teach new duties," and new facts and laws must be acquired if men are to remain adequate to the life of their own institutions, their self-realizations and their mutual help have brought upon them. To the wise and obedient, the most complex life brings no strain nor discomfort. It is as easy to do great things as small, if one only knows how. But to the ignorant, weak and perverse, the growth of civilization becomes an engine of destruction. The freedom of self-realization involves the freedom of self-perdition. Hence appears the relation of "Progress and Poverty" often discussed in social development. Hence it comes that civilization under changing conditions of which the essence is mutual help or altruism, seems to become one vast instrument for the killing of fools. In the specialization of life conditions are constantly changing. Every age is henceforth an age of transition and transition brings unrest because it impairs the value of conventionality. With the lowest forms of life there is no safety save in absolute obedience to the laws of the world around them. This obedience becomes automatic and hereditary because the disobedient leave no chain of descent to maintain their disobedience. All instincts, appetites, impulses to action, even many phenomena of the nature of illusions point toward such obedience. Whether we regard these as variations selected because useful, or as inherited habits, their relation is the same. They survive as guarantees of future obedience because they have brought obedience in the past. And so with the most enlightened man, the same necessity for obedience exists, and the instincts, appetites and impulses of the lower animals remain in him, or disappear only as reason is adequate to take their place. And in any case there is no alleviation for the woes of life "save the absolute veracity of action; the resolute facing of the world as it is."

The intense practicality of all this must be recognized. The truths of science are truths in part only. They must be stated in terms of human consciousness and they can never be dissevered from possible human action. Knowledge which can only accumulate without being woven into conduct, has never been a boon to its possessor. As food must be formed into tissues, so must perfection go over into action. In the lower forms, we have the devices chiefly automatic by which sensation transmitted to the sensorium reappears as motion. In like matter we find in man besides these reflex transfers, and the reflex connections formed by habit, that science becomes changed to art, and knowledge to power. Power and effectiveness are conditioned on accuracy. Every failure in the sense organ, every form of deterioration of the nerves shows itself in reduction of power. Reduced effectiveness shows itself through the processes of natural selection as reduction in safety in life. Thus the degeneration of the nervous system through excesses or through stimulants shows itself in untrustworthy preceptions, in uncontrolled muscles, and in the lack of security in life. Incidentally, all these are recorded by fall in social standing. With the reduction of the accuracy of recognition of reality the person ceases to hold his place as a man among men. Similar failure comes with any cause impairing the recognition of the reality of external things. The sober mind is necessary to secure life. In general, all civilized men are well born. They come of good stock. For the lineage of perversity, insanity and even stupidity is never a long one. The perverse, insane, and the stupid live through the tolerance of others. They cannot maintain themselves, and in spite of charity and the sense of conventionality, the mortality caused by the fool-killer is something enormous. It is an essential element in race progress. It grows with increased civilization, because of increasing complexity of condition. It is the chief compensating influence for the life saving which has been made possible for scientific research.

The recent "recrudescense of superstition" a striking accompaniment of an age of science is in a sense dependent on science. Science has made it possible and the traditions of science are so diffused in the community at large, that fools find it safe to defy them. Those who take dreams for realities; those whose memory impressions are uncontrolled through defective will; those who put mistake subjective sensations produced by disease or disorder for objective conditions, all these are sooner or later dropped from existence taking with them the whole line of their possible successors. The condition of mind which is favorable to mysticism, superstition and revery is unfavorable to life and its continuance is punished with death.

If all men sought healing from the blessed handkerchief of the lunatic, or from contact with old bones or old clothes; if all physicians used revealed remedies and all business were conducted by faith; and all "natural rights" of man were recognized in legality; the insecurity of these beliefs would speedily appear. Not only civilization but civilized man himself would disappear from the earth. The safe shelter of the curve and hollow tree would be the cradle of the new man and the new woman, and the long and bloody road of the progress through fool-killing must for centuries be traversed again. The fool lives in society only by sufferance of the same; the weak by altruism of the strong. That is strong which endures. Might does not make right, but that which is right must fortify itself by becoming might.

So closely is knowledge linked to action that in general, among animals and men, when action is not possible, sensation is absent or not trustworthy. Objects too small to be touched are invisible to the eye. Objects beyond our reach as the stars or the clouds are not truthfully pictured. Accuracy of vision grows less as distance increases. The unfamiliar lends itself readily to illusions. The familiar is recognized chiefly by breaks in continuity. The senses are far less acute, than the organs of sense might permit. This is shown through occasional cases of hyperæsthesia or ultra sensitiveness. This occurs occasionally in abnormal individuals or in unusual conditions. It occurs normally in creatures whose lives in some sense depends on it. Thus some of the most remarkable exhibitions of "mind reading" may be paralleled by retriever dogs whose reason for existence is found in the hyperæsthesia of the sense of small. Hyperæsthesia of more than one of the senses would be to most animals a source of confusion and danger rather than of safety. Man's high development of the brain, in large degree takes the place of acuteness of special senses. And in his perception of external relations he is aided by the devices of science, which may be taken up at will. By means of instruments of precision any of the senses may be aided to an enormous degree, and at the same time the personal equation or individual source of error is largely eliminated. The use of instruments of precision is the special characteristic of the advance of science. No instrument of precision can give us the ultimate essence of any part of the universe. No scientific experiment can do away with the measure of human experiment as the basis of intelligibility. At the same time we can throw large illuminations into "the divinely lighted room" in which according to Balfour, the phenomena of consciousness takes place. By the simple process of photography for example, we may reproduce the objects of our environment. That such pictures do express phases of reality admits of no doubt. For in the photographic camera, all personal equation is eliminated. As to form of outline and reflection of light the "sun paints true," and the paintings thus made by means of the action of non-living matter produce on our senses, impressions coinciding with those of the outside world itself.

How do we know that this is truth? Because we can trust our lives to it. If it were an illusion it would kill, because action based on trust in an allusion leads to death.

One can trust his life to the message sent on a telegraph wire. All who travel by rail do this daily. One can trust his life to the reading of a thermometer. The chemists' tests will select for us foods among poisons. We may trust these tests absolutely. We may safely and sometimes wisely take poisons into our bodies if we know what we are doing. By the advice of a physician, trusting in the weigher's instrument of precision, poisons may do no harm. One grain of strychnine may be an aid to vital processes; a dozen may mean instant cessation of these processes. The balance advises us as to this. All these instruments of precision belong to science. They are examples, three out of thousands of the methods of organized common sense. By means of common sense, organized and unorganized, all organisms that can move are enabled to move safely. The security of human life in its relations to environment is a sufficient answer to the "philosophic doubt" of Berkeley and Balfour as to the existence of external nature. For if all phenomena were within the mind, no one of them could be more dangerous than another. A dream of murder is no more dangerous than a dream of a pink tea, so long as its action is confined to the limits of the dream. But the relation of life to environment is inseparable and inexorable. There is no pardon for a false step, except the half pardon sometimes accorded for not repeating it. It leaves a mark never wholly effaced. "If God should wink at a single act of injustice," says the Arab proverb, "the whole universe would shrivel up like a cast-off snake skin." If the mark of any action were effaceable, this would be true again. But cause and effect are perfectly linked. This is a world of absolute verity, and only through absolute obedience can we meet its requirements.

What we know as pain is the necessary signal of warning of bad results, of bad relations. Without pain, life, conditioned by environment, would be impossible. We need this stimulus to veracity. Those dangers which are painless are the hardest to avoid, the diseases which are painless the most difficult to cure.

An old parable of the conduct of life shows man in a light skiff in tortuous channel beset with rocks, borne by a falling current to an unknown sea. He is kept awake by the needs of his situation. As his boat bumps against the rocks he must bestir himself. If this contact were not painful he would not heed it. If it were not destructive he would not need to heed it. Had he no power to act, he could not heed it if he would. But with sensation, will, freedom to act, narrow though the limits of freedom be, his safety rests in some degree in his own hands. That he has secured safety thus far is shown by his continued existence. He may choose his course for himself, not an easy thing to do, unless he scans most carefully the nature of rocks, wave, and his control of the boat itself. He may follow the course of others with some degree of the safety they have attained. He may follow his own impulses, in man's case inherited from those who found them safe guides to action. But in different cases, neither conventionality, nor impulse, nor desire will suffice. He must know what is about him in order that he may know what he is doing. He must know what he is doing in order to do anything effectively. Ignorant action is more dangerous than no action at all. The "sealed orders" under which the lower animals and our "brother organisms, the plants" are in a measure inadequate for man. With the power of movement and the "knowledge of good and evil," he has no choice but to accept the conditions. He must shape his own life. And thus it comes that there is "no alleviation for the sufferings of man except through absolute veracity of thought and action, and the resolute facing of the world as it is."

And thus it comes that it is well for man not "to pretend to know or to believe what he really does not know or believe." For there is no safety in life either for ourselves or others, if we guide our conduct by any influence less wise or potent than that developed from the co-ordination of human wisdom. We may play at philosophy, if we have pleasure in doing so. We may find intellectual strength through exercise of the mind, even on its own products. But we must guide our lives by science. The appetites, impulses, passions, illusions, if you choose, which have proved safe in the past development of life, science would not destroy. But they must be subordinate to the will and intellect. And this subordination of the lower to the higher motives in life is the culmination of evolution, as it has been the ideal of those whose strivings for better relations of man to man, and of man to nature, have been worthy of the name of religion.

As knowledge is worthy only as a guide to action, and as knowledge, being human, can be approximate only, not reality, but a movement toward reality, we are brought to the oft-quoted words of Lessing:

"It is not the truth in man's possession that makes the worth of man. Possession makes man selfish, lazy, proud. Not through possion, but through long striving, comes the ever-growing strength. If d should hold in his right hand all truth and in his left hand only the seless struggle to reach after truth, and He should say to me, 'choose,' ould fall in humbleness before his left hand and say:

'Father, give; the perfect truth is but for Thee alone.'"

At the close of Dr. Jordan's address, President Barnes with few graceful words, handed over the gavel to his successor in ice, J. W. Linscott. Mr. Linscott replied as follows:

I receive the gavel from the hands of one whose loving influence s become a living reality in the educational world of California, and is fact makes the responsibilities of the position still heavier upon my oulders.

I congratulate you all upon the success of the work of the last year, d trust that, with your help, I may be able to do my part creditably is year. We ask the aid and sympathy of all the teachers of California, at we may go onward toward the realization of truth. And now may spiration go with you all, and strength and courage for work beyond.

The Association is adjourned till December 28, 1896.

APPENDIX.

EDUCATIONAL COUNCIL.

At the meeting of the California Teachers' Association, held at Oakland, January, 1896, the Executive Committee selected the following persons to take the places of those retiring from the Educational Council at that time: J. W. McClymonds, Jas. A. Barr, Washington Wilson.

F. L. Burk was also chosen to fill the unexpired term of Jas. G. Kennedy, deceased.

The names and terms of office of the members of the present Council are as follows:

Ex-Officio.

Hon. Samuel T. Black, Sacramento.
State Superintendent of Public Instruction.

Appointed.

		Term Expires.
C. E. Hutton,	Los Angeles,	Dec., '96
C. H. Keyes,	Pasadena,	Dec., '96
F. L. Burk,	Santa Rosa,	Dec., '96
Prof. Elmer E. Brown,	Berkeley,	Dec., '97
F. A. Molyneaux,	Pomona,	Dec., '97
Frank Morton,	San Francisco,	Dec., '97
Prof. Geo. H. Howison,	Berkeley,	Dec., '98
Prof. Fernando Sanford,	Palo Alto,	Dec., '98
P. M. Fisher,	Oakland,	Dec., '98
J. W. Linscott,	Santa Cruz,	Dec., '99
Prof. Irving Stringham,	Berkeley,	Dec., '99
Miss Lucy Washburn,	San Jose,	Dec., '99
J. W. McClymonds,	Oakland,	Dec., 1900
Jas. A. Barr,	Stockton,	Dec., 1900
Washington Wilson,	Chico,	Dec., 1900

CONSTITUTION

OF THE

CALIFORNIA TEACHERS' ASSOCIATION

PREAMBLE.

For the purpose of furthering the educational interests of the State, f giving efficiency to our school system, of furnishing a practicable asis for united action among those devoted to the cause in which we are ow engaged, and of securing and maintaining for the office of teacher, its ue rank among the professions, we, the members of this Association, o hereby adopt the following

CONSTITUTION.

SECTION I. NAME.—This organization shall be known as the Cali-rnia Teachers' Association.

SEC. II. MEMBERSHIP.—All persons who are now, or who may be ereafter officially connected with the public or private schools of the tate, or interested in the cause of education, may become members of is Association by signing the Constitution and paying the annual fee of ne dollar. The Secretary of the Association shall annually publish in e November number of the "Educational Journal" of this State, with-t expense to the Association, a list of the members, providing, how-ver, that before dropping any member for non payment of dues, such ember shall, one month before that publication, be notified that dues r the current year are now payable.

SEC. III. OFFICERS.—The officers of the Association shall be a resident, two Vice-Presidents, a Secretary, an Assistant Secretary, a reasurer and a Railroad Secretary, whose duty it shall be to make rangements for the rate of transportation of members of this body; nd these officers shall constitute an Executive Committee.

Term.—All officers shall serve for a term of one year.

Election.—The election of the foregoing officers shall be by ballot, d any member may place a name in nomination for any office, pro-ided, however, that no nominating speeches shall be permitted, and at if no person shall receive a majority of the votes cast for any office pon the first four ballots, at each ballot thereafter the name upon the st receiving the lowest number of votes shall be dropped, and so on ntil the majority of the votes shall have been secured by one candidate; d this election shall take place at the opening of the afternoon session the second day of the winter meeting.

SEC. IV. DUTIES AND POWERS OF THE EXECUTIVE COMMITTEE. -It shall be the duty of the Executive Committee to fix the time of olding general meetings of the Association, to prepare programs, to rocure attendance of lecturers and other speakers, and to make all the ecessary arrangements for the meetings.

Indebtedness.—They shall not incur any indebtedness in excess of the funds in the hands of the Treasurer.

Vacancies.—They shall have power by majority vote to fill all vacancies in office occurring between meetings of the Association.

Annual Report.—They shall make to the Association, on the last day of its winter meeting, an annual report of its finances and membership, which report shall be submitted in writing.

Order of Business.—The Executive Committee shall have power to arrange the order of business at all the meetings; provided, that reports of standing committees shall be heard on the afternoon of the second day of the winter meeting.

SEC. V. MEETINGS.—There shall be a general meeting during such days as the Executive Committee shall determine, at a point to be determined by the vote of the Association, in the same manner as heretofore described for the election of officers, so that the claims of each city to consideration may be presented by one speaker, who shall not occupy more than five minutes; and the Executive Committee may call a second meeting in June or July, at such place as they may determine.

SEC. VI. CLAIMS.—All claims against the Association shall be paid by the Treasurer upon the order of the President, countersigned by the Secretary. Whenever the Treasurer shall doubt the validity of any claim, for which an order on the Treasurer may be presented, he may submit the same to the Executive Committee.

SEC. VII. AMENDMENTS.—The Constitution may be amended or altered, provided at least one day's notice, in writing, embodying the amendment or amendments, to be made, be given in open session of the Association; and provided, further, the same shall be approved by a two-thirds vote of the members present, which vote shall be taken not later than the next to the last day of the general session.

SEC. VIII. COUNCIL OF EDUCATION.—The Advisory Board of this Association shall be composed of fifteen members, who, together with the State Superintendent of Public Instruction, shall constitute the Council of Education. Its duty shall be to consider and report to the general body the desirability and means of securing reform in educational legislation and practice.

The term of office for members of this Council shall be five years; provided, however, the first list of members shall be appointed by the President of the Association immediately upon the adoption of this section; three to serve for one year, three for two years, three for three years, three for four years and three for five years; and annually thereafter three members shall be appointed by the Executive Committee of the General Association to serve the full term of five years. The Executive Committee shall also have power to fill all vacancies occurring in the Council between the meetings of the Association; the appointments so made to be subject to the confirmation of the General Association at its ensuing meeting.

And it is further provided that the President of the Association shall, in appointing the list of members, designate the State Superintendent as Temporary Chairman, and shall also designate a Temporary Vice-President and Secretary, and these three shall act as Temporary Executive Committee of the Council, prepare its first program, and serve until a permanent organization is perfected.

The first meeting of this body shall be held in the month of July, 1892, at a time and place to be designated by the Executive Committee of the Council herein provided for, and thereafter the Council shall meet semi-annually, alternating its sessions between the cities of Oakland and Los Angeles.

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Chef de l'atelier de Lithographie,	MM. Champenois ✻.
— *de Typographie,*	Plon O. ✻ et Nourrit ✻
— *de Cordonnerie,*	Grell.
Professeur d'Horticulture,	Demange.
— *de Sculpture sur bois,*	Drovin.
— *de Menuiserie,*	Franclet.
Professeur-adjoint de menuiserie	Duguey.

EXERCICES MANUELS

Professeur : M. Franclet.
Professeur-adjoint : M. Duguey.

GYMNASTIQUE

Professeurs : MM. Jacquenod.
Lesieux, Emile.

SERVICES ANNEXES

CLINIQUE OTOLOGIQUE

Médecin en Chef, M. le Dr Ladreit de Lacharrière (O. ✱)
Chef de clinique, M. Fabre.

CLINIQUE LARYNGOLOGIQUE

M. le Dr Ruault (✱)

ANNÉE SCOLAIRE 1893-1894

Institution Nationale des Sourds-Muets de Paris

COMPTE RENDU

DE LA SÉANCE

DE DISTRIBUTION DES PRIX

La distribution des prix aux élèves de l'Institution Nationale des Sourds-Muets de Paris a eu lieu le Lundi 6 Août, à trois heures de l'après midi, dans le grand préau de gymnastique qui se trouve dans l'une des cours de l'Institution, sous la présidence de M. Albert Meurgé, avocat à la Cour d'appel, Maire du V^{e} arrondissement, assisté de M. Marguerie, Conseiller d'Etat, président de la Commission consultative de l'Institution et de M. Javal, Directeur.

M. Faillet, Conseiller municipal de Paris, président de la Commission de Surveillance de l'Institution départementale des Sourds-Muets d'Asnières, M. Grosselin, ancien chef du service sténographique à la Chambre des députés, M. Plon, directeur de l'imprimerie Plon et Nourrit, M. Baudard, directeur de l'Asile de Vaucluse, ancien directeur de l'Institution Nationale des Sourds-Muets de Chambéry, M. Baguer, directeur de l'Institution départementale des Sourds-Muets d'Asnières, avaient pris place autour du président, ainsi que tous les fonctionnaires de l'Etablissement, le Censeur des Études, le Receveur, l'Econome, l'Aumônier, le Médecin en chef, l'Architecte et tous les membres du corps enseignant.

On remarquait, en outre, sur l'estrade, M. Noblet, imprimeur, M. Fartois, négociant à Bordeaux, MM. le Dr Luiz Lobo et Rodrigues de Souza, délégués du gouvernement Portugais, MM. Gaillard, publiciste, Colas, dessinateur, Hennequin, statuaire, Hirsch et Léon Lambert, graveurs, et plusieurs autres artistes sourds-muets.

Dans l'assistance, au milieu des parents et des amis des élèves, on aperçevait : M. le Dr Chervin, directeur de l'Institution des Bègues de Paris et du journal « *La Voix* »; M. Pollacchi, sous-intendant militaire, Madame Regnard, Mademoiselle Lesage, d'anciens élèves de l'Institution et de nombreux représentants de la presse parisienne.

Après avoir déclaré la séance ouverte, M. le Président a donné la parole à M. Bassouls, professeur qui a prononcé le discours suivant :

MONSIEUR LE PRÉSIDENT,

MESDAMES, MESSIEURS,

Quand une personne étrangère à notre enseignement apprend que les sourds-muets parlent et comprennent la parole au mouvement des lèvres, ce qui, dans ce résultat frappe le plus son esprit, c'est que les muets parlent. L'importance de la lecture sur les lèvres échappe le plus souvent à l'attention. C'est en elle cependant que se trouve la clé de notre enseignement, puisque la méthode orale pure repose toute entière sur ce principe : Enseigner la parole par la parole. Or, comment faire, si ce n'est en mettant à profit cette merveilleuse faculté du sourd, qui lui permet de distinguer par la vue les mouvements de l'organe vocal pour arriver ensuite à les imiter. C'est aussi et surtout grâce à la lecture sur les lèvres que nous pouvons avec quelque raison nous flatter de rendre le sourd-muet à la Société, car sans la ressource qu'elle lui offre, notre élève réduit à l'usage de la parole seule n'en resterait pas moins incapable de converser. Elle nous était donc indispensable pour obtenir un résultat complet, et son enseignement s'imposait impérieusement.

Bien que la possibilité de saisir la parole au mouvement des lèvres ait été depuis longtemps reconnue, on n'a pas toujours voulu admettre qu'elle put faire l'objet d'études spéciales.

Déjà, dès 1620, dans le premier ouvrage qui ait été publié sur notre enseignement, l'auteur Jean Paul Bonet, un espagnol, nous apprend comment il fut amené à tirer parti de la vue pour enseigner la parole à son élève, le frère du connétable de Castille devenu sourd à deux ans : « Je me livrai, dit-il, à d'attentives investigations, et je partis de ce principe que, sens ou faculté, ce qui fait défaut à un être humain se répartit entre ses autres sens, ses autres facultés. Dans cette conviction, je contemplai, j'étudiai, j'expérimentai la nature, et j'acquis ainsi la certitude que, non seulement elle n'avait pas refusé l'intelligence au muet, mais que de plus, elle l'avait doué d'une très grande puissance d'attention pour suppléer à son défaut d'ouïe. »

Malgré cette observation qui aurait dû l'amener à cultiver d'une façon toute spéciale la lecture sur les lèvres, l'illustre maître, tout en reconnaissant que les muets arrivent à comprendre la parole aux mouvements de la bouche, ne voulut pas élever ce procédé à la hauteur d'un art reposant sur des règles précises. Il déclare en effet, qu'un pareil résultat est uniquement dû à l'extraordinaire puissance d'attention particulière aux sourds-muets et non aux leçons d'un maître.

L'opinion de Bonet nous paraît éxagérée, car il n'est pas douteux que le secours d'un professeur spécial doit considérablement simplifier la tâche du sourd dans l'acquisition de la lecture sur les lèvres, et aplanir bien des difficultés. Il n'en est pas moins vrai cependant, que la nécessité, cette rude maîtresse, est bien capable aussi d'atteindre seule ce résultat, et nombreux sont les exemples que nous pourrions citer.

Même avant Bonet, ne trouvons-nous pas dans Rabelais, l'histoire d'un italien devenu sourd par accident et qui avait appris seul à lire sur les lèvres. Et beaucoup plus tard, dans un ouvrage du médecin anglais John Bulwer, deux autres exemples remarquables attirent notre attention. C'est d'abord une femme d'Edimbourg, « Jennet Lowes sourde-muette de naissance, qui était parvenue grâce à des efforts personnels d'attention et d'observation, à comprendre tous les gens de sa maison au seul mouvement des lèvres et sans qu'ils eussent besoin de parler à haute voix. »

Il est ensuite parlé d'un M. Crispe, habitant Londres, et qui, à la Bourse des Marchands, lisait de loin sur les lèvres de ses concurrents, et parvenait ainsi à surprendre des renseignements dont il pouvait tirer profit.

Par ces quelques exemples empruntés à différentes époques, on voit que la lecture sur les lèvres n'est pas une nouveauté: on peut même dire qu'elle est pratiquée par tout le monde dans une certaine mesure, et qu'elle a dû l'être de tout temps. Qui n'a remarqué en effet que l'on comprend plus facilement une personue en la regardant qu'en lui tournant le dos, et n'est-ce pas une observation mille fois faite qu'au spectacle, par exemple, on comprend très bien l'acteur en scène si on ne le quitte pas des yeux, tandis que bien des mots échappent quand on cesse de le regarder? Diderot ne prétend-il pas qu'au théâtre il se bouchait les oreilles pour mieux entendre, et Le Sage devenu sourd dans sa vieillesse, n'assistait-il pas quand même à la représentation de ses pièces, disant qu'il les jugeait bien mieux depuis qu'il n'entendait plus les acteurs?

Que d'exemples je pourrais citer encore si je ne craignais d'abuser de votre bienveillante attention...

Il est évident que toutes ces observations devaient amener ceux qui ont pris à cœur d'arracher le sourd-muet à son triste isolement, à étudier le mécanisme de la parole au point de vue spécial de la lecture sur les lèvres. Mus par ce haut sentiment d'humanité, mieux inspirés que Bonet, ils se sont efforcés d'établir les règles de cet art, et, comme il est rare de manquer un but que l'on désire passionnément atteindre, le succès a couronné leurs généreux efforts.

C'est vers la fin du XVIIe siècle qui fut commencé d'une façon méthodique l'enseignement de la lecture sur les lèvres. Nous la trouvons appliquée d'abord en Hollande, puis successivement en Allemagne, en Suisse, en Italie, en France : l'abbé Deschamps lui consacra un chapitre dans son Cours élémentaire d'éducation des Sourds et Muets publié en 1779, puis un ouvrage complet « De la manière de suppléer aux oreilles par les yeux en 1783. » Mais dans ces différents essais, comme on était loin encore de lui donner le rôle important qui lui a été dévolu dans ces derniers temps !

Déjà depuis un quart de siècle l'Italie s'est lancée dans la voie du progrès qui fut le point de départ de la méthode orale pure, et c'est de là que nous est venue, il y a tantôt quinze ans, la formule initiale qui assignait à la lecture sur les lèvres, la première place comme moyen et comme but de notre enseignement. Complétée et perfectionnée chez nous depuis cette époque, elle n'a cessé de se développer et de s'améliorer. Aussi pouvons-nous dire aujourd'hui qu'elle a fait ses preuves, et les résultats sont là pour témoigner de son influence bienfaisante sur l'état social du sourd-muet. Délaissés de tous à cause de la difficulté de communications alors qu'ils n'avaient à leur service que la mimique ou l'écriture, nos éléves aujourd'hui, non seulement tournent à leur profit la nouvelle ressource mise à leur disposition, mais encore se rendent utiles à leur entourage. Les moins bien doués même en bénéficient largement, et je connais ici des enfants d'une intelligence très ordinaire, qui ont écrit maintes fois sous la dictée de leurs parents à peu près illettrés, des lettres que ceux-ci n'étaient point en état de faire eux-mêmes.

Il est bon d'ajouter que sous le rapport de la lecture sur les lèvres le sourd muet possède des aptitudes spéciales. Il dispose d'une force d'attention et d'observation qui s'explique par son défaut d'ouïe: ne perçevant rien par l'oreille, il est moins distrait dans l'exercice du sens de la vue qui acquiert une plus grande perspicacité, et c'est ainsi qu'il peut arriver progressivement à distinguer tous les mouvements de l'organe vocal. Pour nous, entendants-parlants, la lecture sur les lèvres est très difficile, et les dispositions particulières du sourd-muet pour cette étude lui assurent une supériorité que nous reconnaissons de bon gré. Triste privilège bien chèrement payé et terriblement amoindri par l'absence d'un sens des plus utiles! Si d'une part, en effet, la surdité vaut à nos élèves une puissance visuelle peu commune, il n'en reste pas moins vrai que cette infirmité les place dans un état d'infériorité incontestable pour l'acquisition de la connaissance de notre langue. Ils se trouvent en quelque sorte dans la situation d'un myope qui voudrait apprendre à lire seul, n'ayant à son service que de bonnes lunettes. Ses efforts seront vains si personne ne vient l'initier à la connaissance des lettres de l'alphabet qu'il verra sans les comprendre. Il en est de même du sourd-muet. La finesse de sa vue n'est qu'un faible avantage tant qu'il ne connaît pas la signification de la parole, ou plutôt des mouvements qui la produisent L'apprentissage de la lecture sur les lèvres suit pas à pas l'enseignement de la langue et ne s'obtient pas sans efforts; aussi doit-on procéder avec une sage lenteur. Il faut du temps, beaucoup de temps pour passer des lettres aux syllabes, et des syllabes aux mots, aux phrases, à la conversation. L'élève ne s'habitue que peu à peu à distinguer tout cela sur la bouche de son maître et de ses camarades, puis, à la longue, sur toutes les bouches indifféremment, de telle sorte qu'il parvient à déchiffrer toutes les prononciations, comme on parvient à déchiffrer tous les manuscrits.

Vous devinez sans peine la satisfaction du sourd-muet parvenu à ce résultat, et sa fierté paraît bien légitime quand ses efforts se trouvent couronnés par la conquête d'un diplôme comme le certificat d'études primaires.

Mais ce n'est pas seulement dans les examens que nos sourds-muets ont des succès. Dans le monde même, car ils vont quelquefois dans le monde. ils ne font pas trop mauvaise figure. Témoin entr'-autres, ce fait que j'emprunte à un membre distingué de l'Université, M. Dussouchet, que nous nous honorons de considérer comme appartenant un peu à cette maison: « Je pourrais, dit M. Dussouchet, citer une jeune fille qui, dans un bal, dansa plusieurs fois avec un jeune homme, et qui le trouva instruit autant que distingué. Elle n'en put croire ses oreilles quand on lui apprit que cet élégant danseur était un sourd-muet. »

En constatant de pareils résultats, on est en droit de se demander pourquoi la lecture sur les lèvres a été si longtemps négligée. Ses avantages étaient-ils contestés? Nullement. La seule raison qui ait retardé la réforme, c'est que les professeurs étaient rares et les élèves nombreux. Or, un maître ne peut s'occuper, avec la méthode orale, que d'un petit nombre de sujets. Ce fut uniquement pour ce motif que l'abbé de l'Epée se résigna à enseigner les signes, car notre illustre fondateur se trouvait seul et voulut quand même distribuer les bienfaits de l'instruction au plus grand nombre possible. Mais au fond, toutes ses préférences allaient à la méthode orale, et il se rendait si bien compte de l'insuffisance des signes qu'il écrivait : « Le monde n'apprendra jamais à faire courir la poste à ses doigts et à ses yeux pour avoir le plaisir de converser avec les sourds-muets. L'unique moyen de les rendre totalement à la société est de leur apprendre à entendre des yeux, et à s'exprimer de vive voix. » Ce que le digne prêtre ne put faire faute de ressources à été réalisé à notre époque.

La Convention avait pris sous sa protection l'œuvre de l'abbé de l'Epée en érigeant son école en Institution Nationale; il appartenait à la troisième république de continuer la tradition de sa grande aïeule et elle n'y a pas failli. Prodiguant sans compter ses bienfaits à cette classe de déshérités dont elle veut faire de bons citoyens, elle s'est imposé les plus lourds sacrifices pour faire bénéficier les sourds-muets de tous les progrès de la science capables de leur assurer un avenir meilleur.

MESDAMES, MESSIEURS,

Grâce à cette généreuse sollicitude; les sourds-muets peuvent aujourd'hui vous parler et vous comprendre. Tous ne parlent pas également bien et leur élocution varie suivant les aptitudes de chacun. Cette parole, quoique trop souvent défectueuse a son utilité cependant, et si l'on vous consultait, Mesdames, toutes vous affirmeriez avec une égale bonne foi quelle a même un grand charme, cette voix de vos enfants que vous aviez cru naguère irrémédiablement emmurés dans la surdi-mutité. Pour n'être point toujours complètement justifié, votre enthousiasme n'en est pas moins légitime: il est pour nous un secours et un encouragement précieux, car la joie qu'éprouvent nos chères élèves à voir le bonheur qu'ils vous procurent avec ce talent nouveau, nourrit et fait grandir en eux le désir de parler.

MONSIEUR LE PRÉSIDENT,

Cette sollicitude que porte le Gouvernement à notre Ecole, et à laquelle je rendais hommage tout à l'heure, se manifeste encore aujourd'hui sous la forme la plus délicate. En vous priant de venir présider cette cérémonie, Monsieur le Président du Conseil, Ministre de l'Intérieur, nous fait un honneur que nous apprécions hautement et dont nous lui sommes vivement reconnaissants. Nul choix ne pouvait être plus flatteur pour nous Nous connais-sons le noble caractère du fonctionnaire qui administre notre arrondissement avec tant d'autorité et de dévouement: Nous avons dès longtemps éprouvé par nous-mêmes la sollicitude et l'ardeur avec lesquelles vous soutenez et vous encouragez les œuvres de philanthropie, de science et de progrès, dans ce brillant quartier des Ecoles auquel nous nous honorons d'appartenir.

Tous les ans, nous présentons avec succès au certificat d'études primaires quelques-uns de nos élèves sortants, et, jamais vous n'avez manqué d'encourager leurs efforts par votre gracieuse présence aux examens.

Récemment encore, vous vouliez bien applaudir à la manière dont les cinq éléves de la dernière promotion répondaient aux questions du Jury; cela seul eut suffit à nous prouver l'intérêt que vous portez à toutes les œuvres nobles et généreuses.

Nous sommes particulièrement flattés de voir qu'au milieu des travaux qui sollicitent de tous côtés vos soins et votre activité, vous avez réservé pour nous aujourd'hui quelques-uns de vos précieux moments. Aussi bien l'œuvre de l'abbé de l'Epée est grande entre toutes. Ses bases sont la bienfaisance et le dévoûment. A ce titre, votre concours lui a toujours été acquis. — Nous vous sommes profondément reconnaissants d'avoir bien voulu en donner un public témoignage.

Aprés ce discours très applaudi, M. le Président a pris la parole et s'est exprimé en ces termes :

Mesdames,
Messieurs,
Mes Chers Enfants,

En me donnant la mission de présider cette cérémonie, M. le Ministre de l'Intérieur m'a fait un honneur dont je ne saurais trop le remercier. Les orateurs doivent, en pareille circonstance, déclarer que cet honneur comporte des dangers. Permettez-moi de déroger aujourd'hui à la tradition : s'il y a péril à s'aventurer dans une région inconnue, il y a aussi joie profonde à marcher vers des frères longtemps ignorés et qui, relevés des déchéances de nature, sont enfin rendus à la grande famille humaine.

Des frères ignorés! Oui, tels ils étaient ces enfants au visage impassible et triste, qui, deux par deux, pensionnaires silencieux, s'en allaient autrefois par nos promenades publiques.

Insensibles à la curiosité de la foule, ils allaient multipliant les signes, et tout à cette télégraphie des doigts qui transmettait leurs pensées. Eux seuls se comprenaient, et, de les voir passer, perdus dans leur isolement, retranchés du monde, cela nous serrait le cœur. Ils semblaient des parias dans la Patrie commune ! L'angoisse de ces souvenirs se dissipa comme un mauvais rêve lorsque, il y a quelques jours, je visitai cette maison : Par les fenêtres ouvertes, les paroles s'envolaient, bien humaines, malgré leur accent parfois rauque, répétant les mots saisis sur les lèvres du maître, exprimant à leur tour une pensée... et le chœur rythmé de ces voix d'enfants, si longtemps endormies, se perdait dans le soleil et les grands arbres. Et il me sembla que l'air frissonnait doucement au souffle d'une humanité nouvelle.

Ces impressions douces et réconfortantes, c'est à vous que nous les devons, messieurs les Professeurs, à la nouvelle méthode d'enseignement que vous appliquez avec tant de succès sous l'intelligente direction de M. Javal, si profondément dévoué à son œuvre.

Merci à vous, monsieur le Directeur, merci à vos vaillants auxiliaires du personnel enseignant, merci également au personnel médical à la tête duquel je salue M. le docteur Ladreit de Lacharrière, un de ces praticiens qui savent unir la science à une bonté paternelle. Grâce à vos efforts combinés que les difficultés physiologiques et intellectuelles ne rebutent ni ne lassent, la barrière qui séparait de nous ces pauvres enfants est désormais tombée.

Votre dévouement infatigable sait acquitter chaque jour la dette nationale que nos pères de la Révolution ont contractée envers ces déshérités.

L'esprit de charité inspira tout d'abord les premiers bienfaiteurs des sourds-muets. L'œuvre de l'abbé de l'Epée n'en garde pas moins son caractère de grandeur et de courageux dévouement. En recueillant pieusement dans cet ancien couvent de

Saint-Magloire, les souvenirs, même les plus lointains qui se rattachent au premier éducateur des sourds-muets, vous vous êtes inspirés del'esprit de la République toujours prêt à consacrer la gloire de ceux qui servent bien la Patrie. Mais il appartenait à la Révolution française de substituer à l'idée de charité, premier principe de l'éducation donnée aux sourds-muets, l'idée d'un véritable devoir d'Etat.

La Convention proclame qu'il y a là une dette nationale, tous les enfants appartenant à la Patrie. Elle esquisse déjà le système d'une sorte de pédagogie orthopédique qui, triomphant de la nature, pourvoiera le sourd-muet des aptitudes nécessaires à la lutte pour l'existence.

Le conventionnel Maignet, membre du Comité de secours, a, dans un remarquable rapport, jeté les bases d'une organisation à peu près réalisée aujourd'hui : Création d'une école normale d'élèves-maîtres — Un Conseil de surveillance administrative; des écoles départementales correspondant entre elles afin de vulgariser les progrès obtenus; des ateliers destinés à l'enseignement professionnel; l'école normale ouverte à un certain nombre de maîtres étrangers; telles sont les grandes lignes de ce projet, conçu au milieu de la tourmente effroyable dans laquelle la France se débattait alors.

Vous n'attendez pas de moi, Mesdames et Messieurs, que j'expose les diverses méthodes d'enseignement qui ont précédé la méthode orale aujourd'hui employée. En l'espèce, le sujet n'a plus qu'un intérêt historique, et, bien qu'un préjugé populaire donne aux avocats la déplorable facilité de parler sur toutes choses sans les bien connaître, je vous confesserai mon ignorance absolue en la matière. Aussi bien, l'honorable Professeur que nous venons d'applaudir nous a-t-il renseignés sur ce point.

Avec lui nous saluons la grande réforme que M. Ch. Lepère, un ministre dont la démocratie conservera avec fierté le souvenir, réalisa en 1879. La méthode orale qui remplaça définitivement la mimique en cet Institut, vers 1880, si je ne me trompe, fait des lèvres de celui qui parle un véritable manuscrit que déchiffrent les yeux du sourd-muet. Celui-ci prend dès lors contact avec la Société. Que de bienfaits en découlent au point de vue moral et intellectuel ! Tout d'abord c'est le programme de l'enseignement primaire mis à la portée de ces enfants auxquels la vie scolaire semblait à jamais interdite. Bien plus, les examens du certificat d'études primaires ont été tentés, et avec succès, par des élèves de l'Institution nationale des sourds-muets. La municipalité du V^{e} arrondissement, sur laquelle je tiens à reporter les paroles élogieuses qui m'étaient adressées tout à l'heure, est heureuse d'accueillir les enfants que cette institution lui envoie chaque année, depuis 1891. C'est ainsi que, depuis 4 ans, tous les élèves du cours supérieur (fondation Itard) sont sortis de cet établissement, munis du certificat d'études, en tout 23 élèves.

Certes, « les argonautes s'en allant à la conquête de la Toison d'or nous apparaissent, dans les lointains de la légende grecque, comme des héros merveilleux », mais combien aussi sont héroïques, en leur genre, nos chers sourds-muets s'en allant à la conquête de cette toison d'or moderne, un diplôme scolaire qui, tout modeste qu'il est, représente un gros bagage de connaissances acquises.

Et ce que le sourd-muet a dû peiner pour les acquérir !

Les poètes n'en continueront pas moins à chanter l'odyssée des argonautes, et les sourds-muets devront se contenter des félicitations que le maire de cet arrondissement leur adresse, ému de leur vaillance et fier de leurs succès

Les programmes de l'enseignement donné aux sourds-muets en l'Institution nationale ne comportent pas seulement l'enseignement scolaire proprement dit On a voulu que, en sortant de cette maison, le sourd-muet fût à même de gagner sa vie — on lui apprend un métier; c'est à M. le sénateur Corbon qu'est dûe l'amélioration de cet enseignement professionnel qui, vous l'avez vu, faisait partie du programme tracé par la Convention.

La lithographie, la typographie, la cordonnerie, la menuiserie, la sculpture sur bois et même la couture, sont enseignées ici dans des ateliers dirigés par des hommes passés maîtres en ces diverses branches du travail manuel.

L'horticulture a, pour atelier, le magnifique jardin de cet établissement, un atelier où l'enfant apprend le jardinage, et... la bonne santé. Mais, si grands qu'ils soient, les jardins sont encore trop petits pour réaliser le but poursuivi.

Il faudrait une ferme-école, en pleine campagne.

Cette création est réclamée par le Conseil de perfectionnement de l'enseignement professionnel dont l'initiative intelligente a tant fait pour les sourds-muets; elle est également sollicitée par toutes les asemblées compétentes, on a compris les heureux résultats qu'aurait cette instition.

La ferme-école serait surtout ouverte aux sourds-muets arriérés, c'est-à-dire à ceux qui, par suite de quelque lésion cérébrale, sont dans un état notable d'infériorité intellectuelle. Il importe de les instruire à part et de leur apprendre un métier simple et facile. Certes, les connaissances agricoles ne sont pas de celles qui s'acquièrent aisément, et il ne faudrait pas espérer que nos pauvres arriérés deviendraient des chefs de grande exploitation, mais par un enseignement essentiellement pratique, ils pourraient s'assimiler les divers procédés de culture et devenir d'utiles travailleurs.

Leur développement physique et intellectuel ne pourrait être que facilité par cette vie au grand air, parmi ces mille leçons de choses que la nature donne à qui sait observer. Et le sourd-muet est, de par son infirmité, un observateur attentif.

J'ajouterai que la culture du sol peut avoir, au point de vue moral, des conséquences imprévues.

« L'homme fait la terre » a dit Michelet. — Parole profonde qui est la glorification du Paysan. Oui, le paysan fait la terre productive par son travail rude, incessant, que les déceptions de toutes sortes n'arrêtent pas. Dans le sillon ouvert il jette de sa vie avec le grain, et, cette terre qu'il fait sienne en se donnant à elle tout entier, il l'aime, comme son enfant éternellement jeune.

Ce sentiment d'amour qui unit le cultivateur au sol de la Patrie, nos sourds-muets arriérés l'éprouveront d'autant plus que leur isolement leur créera une intimité plus grande avec la nature. Le soleil ne mûrit pas seulement les moissons, il réchauffe, mûrit le cœur des humbles et ses rayons éclairent les ténèbres les plus profondes.

Donc, ne désespérons pas d'amener, même chez ces arriérés, l'éclosion intellectuelle et morale qui fera d'eux des hommes utiles.

Avec cette émotion communicative qui est la flamme de la véritable éloquence, M. Léon Bourgeois disait, à cette même place, il y a quelques années : « La science, une fois de plus, a vaincu la matière. — Les sourds nous entendent, et les muets nous parlent..., ils vivent de la vie commune ; ils sont des citoyens utiles, ils sont les égaux de tous dans la nation républicaine. »

Ces belles paroles de celui qui fut mon compagnon d'études et auquel je garde un souvenir que les années n'altéreront pas, résument admirablement l'œuvre accomplie.

Oui, une fois de plus, la science a vaincu la matière, et, apportant une heureuse variante à la sombre sentence de Dante, l'Institution nationale des sourds-muets a le droit d'inscrire à son fronton :

« Vous qui entrez ici, ayez l'espérance ! »

Fréquemment interrompu par les applaudissements de toute l'assistance, le discours de M. Albert Meurgé, empreint d'une véritable éloquence, a reçu de tous le plus chaleureux accueil.

A ce moment, M. Faillet, Conseiller municipal de la Seine, initiateur de la fondation de l'Institution départementale des Sourds-Muets d'Asnières, se lève à son tour et, avec la permission du Président rappelle que, sur sa proposition, le Conseil général a créé et inauguré récemment l'Institution départementale des Sourds-Muets.

« Il tient, dit-il, à remercier M. Meurgé de ses « éloquentes paroles et de l'hommage rendu par « lui aux progrès accomplis dans cette maison. « L'Institution départementale d'Asnières, qui « s'inspire et continuera à s'inspirer des saines tra- « ditions de l'Ecole de la rue Saint-Jacques, reçoit « les Sourds-muets pauvres des deux sexes de Paris » et du département de la Seine et leur donne, avec « l'instruction générale, l'enseignement profession- « nel. Là aussi, ajoute-t-il, reprenant l'heureuse « expression de M. Meurgé, nous sommes comme « à l'Institution Nationale, décidés à soutenir la « lutte de la science contre la nature; une fois de « plus, la science vaincra la matière ».

Le Directeur annonce ensuite que des exercices vont être faits par des élèves de 1^re^, 2^e^, 3^e^, 4^e^, 6^e^ et 7^e^ années et du cours Itard, afin de bien marquer la progression suivie dans l'enseignement et le développement intellectuel obtenu dans ces différentes classes. Il ajoute que ces élèves seront successivement présentés au public par leurs professeurs, MM. Boyer, Rancurel, Marican, André, Marichelle, Bélanger et Dupont. Enfin il attire l'attention d l'assemblée sur l'exercice qui va être fait par un des élèves de la classe de 6e année, le jeune Jacques, qui n'entendait pas un mot au début de la 5e année. Aujourd'hui, grâce aux exercices méthodiques d'audition dont il a été l'objet, on peut communiquer avec lui par l'oreille aussi facilement que par la lecture sur les lèvres.

Deux élèves de 1re année, sourds-muets de naissance, ont lu sur les lèvres de leur professeur et répété ensuite des sons, des syllabes, des mots et de petites phrases usuelles.

Deux élèves de 2e année ont répondu à de petites questions posées par leur professeur, montrant ainsi qu'ils pouvaient lire sur les lèvres des phrases entières et qu'ils les comprenaient.

Un professeur de 3e année a présenté deux de ses élèves qui ont causé entre eux et qui ont échangé un certain nombre de questions sur des sujets qui leur étaient indiqués.

Deux élèves de 4e année ont récité chacun un morceau choisi, l'un en prose, l'autre en vers.

Deux élèves de 6e année ont commencé par s'adresser mutuellement des questions sur ce qu'ils feraient pendant les vacances. Puis, l'un d'eux, le eune Jacques, a répété avec une grande sûreté des phrases quelconques que son professeur prononçait à haute voix à son oreille.

Un professeur de 7ᵉ année a présenté deux de ses élèves et leur a adressé sur la géographie et sur l'histoire de France diverses questions auxquelles ils ont répondu avec la plus grande précision.

Enfin le professeur du cours Itard a présenté également deux de ses élèves. L'un a récité à haute et intelligible voix une fable de la Fontaine; l'autre a montré qu'il avait acquis des notions tres complètes sur l'histoire naturelle et sur le droit usuel. A toutes les questions qui lui ont été posées, non seulement par son professeur, mais encore par des personnes de l'auditoire, il a répondu avec une netteté qui a fait l'admiration de tous.

Tous ces exercises ont vivement intéressé le public et ont valu aux élèves de nombreux applaudissements et de chaleureuses félicitations.

M. le Président a donné ensuite la parole au Censeur des études pour la lecture du palmarès.

La proclamation des deux grands prix d'honneur dûs à des fondations, et qui consistent en somme d'argent léguées par Madame Mongrolle (392 fr. 70) et par Madame Fouquet (60 fr.) et la remise aux lauréats de dix boîtes d'outils d'une valeur moyenne de 90 francs chacune, provenant des libéralités des docteurs Itard et Blanchet, en leur vivant médecins de l'Institution, ont été saluées par les acclamations de l'assistance.

Les cinq élèves qui ont subi, cette année, avec succès les épreuves du certificat d'études primaires ont été également l'objet de nombreux applaudissements quand ils sont venus sur l'estrade recevoir des mains de M. le Président leur diplôme et une médaille d'argent portant, avec leur nom, la date de l'examen.

Le Censeur des études annonce que la rentrée des classes est fixée au lundi 8 octobre.

DOCUMENTS DIVERS

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Cours normaux. Comme les années précédentes, les cours normaux d'articulation et de méthode intuitive ont été professés par M. Dubranle, Censeur des études. Il a fait comme chaque année, le cours d'articulation complet. En ce qui concerne le cours de méthode intuitive, il a dû se borner à développer les programmes de 2^e, 3^e, et 4^e années.

Par décisions ministérielles, un certain nombre de personnes étrangères à l'Institution ont été autorisées à assister à ces cours qui ont lieu le mardi et le vendredi de chaque semaine de 2 h. à 3 h.

Parmi ces personnes nous citerons: Des instituteurs et des institutrices de l'école des arriérés de Bicêtre; Mademoiselle Lesage, institutrice libre à Paris, M. le D^r Luiz Lobo et M. Nicolas Péreira Pavao de Souza, délégués par l'œuvre de la miséricorde de Porto (Portugal).

Conférence des Professeurs. — Pendant l'année scolaire 1893-1894, la conférence des professeurs s'est livrée à l'étude de diverses questions relatives à l'enseignement des Sourds-Muets. Elle a en oûtre consacré plusieurs séances à l'examen d'un certain nombre d'ouvrages français et étrangers.

Certificat d'études primaires. — A la session du mois de Juin 1894, l'Institution nationale a présenté à l'examen du certificat d'études primaires 5 élèves appartenant à la classe d'instruction complémentaire fondée par le Docteur Itard. Ce sont les jeunes: HÉROUARD (Ernest), BOYAT, AGNÈS, CHARTON et HERBEMONT. Tous les cinq ont passé cet examen avec succès et ont reçu les félicitations des membres de la Commission.

Ce nouveau succès porte à 22 le nombre des élèves de l'Institution Nationale qui, pendant les quatre dernières années, ont abordé les épreuves du certificat d'études primaires et qui tous ont été reçus.

Publication d'ouvrages. — Dans le courant de l'année scolaire, plusieurs de nos collaborateurs ont publié des ouvrages parmi lesquels nous croyons devoir signaler.

1° *De la manière de suppléer aux oreilles par les yeux*, par l'abbé Deschamps. Edition publiée par les soins de M. Bertoux.

2° *Le livre des mères de Sourds-muets*, par M. Bertoux.

3° *De la manière de suppléer aux oreilles par les yeux*, par l'abbé Deschamps, réimpression publiée par les soins de M. Bélanger.

4° *Bibliographie Générale*, des ouvrages parus en langue française sur l'enseignement des Sourds-Muets, par M. Bélanger.

5° *De la mue de la voix*, chez le jeune sourd parlant, par A. Boyer.

6° *De l'acquisition des idées abstraites par les Sourds-Muets*, par Thollon.

7° *De la préparation des organes de la parole*, chez le jeune Sourd-Muet, par A. Boyer.

Promenades pédagogiques. — Les promenades pédagogiques, dont l'utilité ne saurait être contestée, ont pris, l'année dernière, une grande extension. Tous les jeudis, à moins qu'il ne fit mauvais temps, chaque professeur a fait, avec les élèves de sa classe, une promenade pédagogique, donnant ainsi à son enseignement un champ des plus vastes pour les leçons de choses.

Enseignement du dessin. — Au début de cette année scolaire, il a été apporté un changement dans l'enseignement du dessin confié à M. Burgers, artiste peintre. Jusqu'à cette époque, tous les élèves sans exception avaient suivi le cours de dessin. A partir du mois d'octobre 1893, tous les élèves appartenant aux deux premières années d'études ont dessiné pendant une heure par jour. Dès la 3e année, n'ont été envoyés au cours de dessin que les élèves qui apprennent un métier confinant à l'art et ceux qui ont pour le dessin de véritables aptitudes.

Enseignement professionnel. — On se souvient que, les années précédentes, les élèves de 1re année faisaient, pendant une heure par jour, des exercices Frœbel, tandis que les élèves de 2e, 3e, et 4e années, pendant une heure et demie par jour, travaillaient le bois à l'atelier de menuiserie ou faisaient du modelage à l'atelier de sculpture.

A partir d'octobre 1893, les élèves de 1re et 2e années ont fait des exercices Frœbel pendant une heure par jour. Les élèves de 3e et 4e années ont été admis, avant de se livrer à l'apprentissage d'une profession, à passer une heure et demie par jour dans l'atelier auquel ils appartiendront plus tard, à partir de la 5e année, en qualité de véritables apprentis et pendant 6 heures par jour. C'est, on le voit, commencer en réalité l'éducation professionnelle dès la 3^e^ année du séjour de l'élève à l'Institution.

Aux ateliers de cordonnerie, de jardinage, de lithographie, de menuiserie, de typographie et de sculpture, que l'Institution possédait déjà, il a été ajouté, dès la rentrée d'octobre, un atelier de tailleurs.

Admission à la retraite. M. Pailliez, surveillant général à l'Institution Nationale, est admis a faire valoir ses droits à la retraite à partir du 1^er^ décembre 1893.

Nomination. — Par arrêté ministériel en date du 30 Décembre 1893, M. Lesieux (Emile), Professeur-adjoint, est nommé Surveillant général en remplacement de M. Pailliez admis précédemment à faire valoir ses droits à la retraite.

Nominations et promotions dans l'ordre de la Légion d'honneur. — Distinctions honorifiques. — M. Henri Monod, Conseiller d'état, membre de l'Académie de médecine, directeur de l'Assistance et de l'hygiène publiques, a été promu au grade de Commandeur de la Légion d'honneur.

M. Plon, Directeur de l'imprimerie Plon et Nourrit, a été promu au grade d'Officier de la Légion d'honneur.

M.Camut, architecte, a été nommé Chevalier de la Légion d'honneur.

M. Champenois, Directeur de l'imprimerie lithographique Champenois, a été nommé Chevalier de la Légion d'honneur.

M. le D^r^ Ruault, médecin-adjoint de l'Institution Nationale, a été nommé Chevalier de la Légion d'honneur.

M. André, professeur, a été nommé Officier d'Académie.

MM. Javal, directeur de l'Institution Nationale et Dubranle, Censeur des études, ont été nommés Commandeurs dans l'ordre royal militaire du Christ du Portugal.

Commission consultative. — Par arrêtés ministériels ont été renouvelés les pouvoirs de M. Marguerie, comme Président, de M. Mavré, comme Secrétaire, de MM. Albert Martin et Colmet d'Aage, comme membres de la Commission Consultative.

M. Savoye, ancien député, membre de la Commission consultative, a donné sa démission et a été nommé membre honoraire et remplacé par M. Adolphe Carnot, inspecteur général des Mines et inspecteur des études à l'Ecole Nationale des Mines.

Plusieurs membres de la Commission consultative, MM. Marguerie, Albert Martin, Mavré, Colmet d'Aage ont, à plusieurs reprises, visité l'Institution Nationale.

Visites de l'Institution. — Parmi les personnes qui ont honoré notre Ecole de leur visite pendant l'année scolaire, nous relevons les noms de :

MM. Hitz, ancien représentant de la Confédération Suisse aux Etats-Unis ; Supérintendant du Volta-Bureau.

Wéber, Conseiller municipal de Paris.

Leroux, Inspecteur administratif de l'enseignement, à la Préfecture de la Seine.

Raymond Wecks, Inventeur d'appareils phonétiques.

Pascal, Inspecteur Général des bâtiments civils, membre de l'Institut.

Emilio Mottura, Président de la Commission de l'Institution Royale des Sourds-Muets de Turin.

Alexandre Zaimis, ancien Ministre de Grèce.

Franklin Carter, de Northampton (Etats Unis).

Le Dr Jean Kokinatis, d'Athènes.

Philippe, Chef des travaux au laboratoire de psychologie physiologique à la Sorbonne.

Furstemberg, Directeur de l'Institution des Sourds-Muets de Santiago, (Chili).

Francisco Barrossa, député au Congrès des Etats-Unis mexicains.

Dr Hippocrate Michalacopoulo, d'Athènes.

Frère Médéric, Directeur de l'Institution des Sourds-Muets de Ronchin, (Lille).

Pécaut, Inspecteur général de l'Université.

Sœur Marie des Sept douleurs, de l'Institution des Sourdes-Muettes d'Orléans.

Martinos Sylva, Ministre de Colombie.

Meurgé, Maire du Ve arrondissement.

Faillet, Conseiller municipal de Paris.

Gilby, de l'Institution des Sourds-Muets d'Oxford.

Nef, Directeur d'une Institution de Sourds-Muets en Suisse.

Von Körschelmann, Directeur d'une Institution de Sourds-Muets en Livonie, (Russie).

William Stewart, Président du Conseil des œuvres de Bienfaisance de l'Etat de New-York, etc...

Musée universel des Sourds-Muets. — Pendant l'année scolaire 1893-1894, le Musée universel des Sourds-

Muets s'est enrichi de nouveaux dons et de diverses acquisitions. Nous ne pouvons en donner la liste complète, qui est trop nombreuse. Nous devons nous borner à citer les objets suivants:

Dons

A. Colas, dessinateur-lithographe sourd-muet, Portrait de *Léopold Loustau*; dessin original. *Vue à vol d'oiseau de l'Institution Nationale de Paris*; dessin original. Plusieurs lithographies.

M. Ginouvier; peintre sourd-muet. Dix-neuf portraits lithographies.

Le Carpentier, peintre sourd-muet. *Mélancolie*; toile.

Rouet, de Lesparre, quatre toiles de Frédéric Peyson.

Mademoiselle Marie Boyer, deux toiles de F. Peyson.

Charles Cordier, d'Amiens. Phothographies de dessins d'Etienne De-Fay (*le vieux sourd-muet d'Amiens*).

Joseph Vivien. Portrait du *P. Bouchet*: dessin.

Abbé Léopold Dassy. Portrait et monument de l'*Abbé Dassy*.

Ronquillo (de Asis Walls y) de Barcelone. Portrait de *Pierre Ponce de Léon*. Portrait d'*Inocencio Junkar*, sourd-muet-aveugle.

Volta-Bureau; de Washington, Portrait d'*Hélène Keller*, sourde-muette-aveugle.

Histories of American Schools for the Deaf, ouvrage contenant les vues de toutes les Institutions de Sourds-muets des Etats-unis.

Maille, dessinateur sourd-muet, Portrait de l'*Abbé Lareau*.

Henri Gaillard, Portrait du *Maréchal Mac-Mahon*, par Princeteau; Phot.

Plusieurs lithographies et photographies (groupes, portraits, etc. provenant des Etats-Unis).

Léopold Loustan, peintre sourd-muet, *Dévouement de Mlle Cazotte*; gravure. *Incognito*; *la Sieste*; photographie.

Cercle de l'Abbé de l'Epée, à Liége, Insigne de l'association et divers objets.

Institution de Pelouzey, Portraits des sœurs *Rouzot et Chauvigné*.

Institution de Milan (*Sourds-Muets pauvres de la Campagne*) portrait de l'abbé Tarra; toile.

Institution de Gênes, divers portraits.

Henry Deutsch, pierre lithographique reproduisant la vue de l'Institution Nationale de Paris à vol d'oiseau; commande faite à Aug. Colas à l'occasion du centième anniversaire de l'attribution, décrétée par la Convention en 1794, du séminaire de St-Magloire à l'Institution nationale.

Acquisitions

Une séance publique de l'Abbé Sicard à l'Institution de Paris toile par Drolling.

Portrait de l'*Abbé Sicard* (assiette révolutionnaire).

Portraits de *Talma* et de *Mme Duchesnois*; gravures par Aubert, sourd-muet.

Trente cinq lithographies illustrant le *Catéchisme de Mgr. d'Astros*, par Bonnet, sourd-muet.

Portrait *d'homme* (1822), dessiné par François Martin, sourd-muet.

Portrait du *Duc de Richelieu*, gravé par Boutelou, sourd-muet.

Buste de l'*Abbé de l'Epée*, par G. Hennequin, sourd-muet.

Buste de l'*Abbé de l'Epée*, par Bulio.

L'Abbé Sicard à St-Magloire, lithographie.

Portrait de *Van Helmont*.

Portrait d'*Ulrich*.

Portraits de l'*Abbé de l'Epée*, de *Sicard*, etc., etc.

FEEBLE-MINDED CHILDREN IN THE PUBLIC SCHOOLS.

BY

WILL S. MONROE.

INSTRUCTOR IN PEDAGOGY AND PSYCHOLOGY IN THE STATE NORMAL
SCHOOL AT WESTFIELD, MASS., AND HONORARY MEMBER
OF THE ASSOCIATION OF MEDICAL OFFICERS
OF AMERICAN INSTITUTIONS FOR IDIOTIC
AND FEEBLE-MINDED PERSONS.

[An Address read before the Association of Medical Officers of American Institutions for Idiotic and Feeble-Minded Persons at Fort Wayne, Indiana, May, 1894, and Reprinted from the Proceedings of the Association.]

WESTFIELD, MASS.
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INTRODUCTORY NOTE.

Many requests have come to the writer for copies of his address on "Feeble-Minded Children in the Public Schools"; and, as it has been accessible only in the published proceedings of the association of medical officers before whom it was read, he has decided to reprint it in the present form. In a number of the larger cities of America to-day, the question of segregating the mentally deficient children from those children with normal capacities is forcing itself upon the attention of school officials. The intelligent work of Dr. George E. Shuttleworth in this connection in the elementary schools of London is well worth considering on this side of the Atlantic.

The writer wishes to express his sense of obligation to those superintendents of schools for feeble-minded children who, through personal suggestions and printed reports, have aided him so materially in his studies, and especially to Dr. A. E. Osborne, Superintendent of the California Home for the Care and Training of Feeble-Minded Children, Dr. Walter E. Fernald, Superintendent of the Massachusetts School for the Feeble-Minded, and Dr. A. C. Rogers, Superintendent of the Minnesota School for Feeble-Minded. These three gentlemen take high rank in the field of pathological education, and the institutions over which they preside, are doing a grade of work well worthy the thoughtful attention of American teachers of all classes of children.

Three European specialists have greatly aided the writer in his efforts to understand the means of training the abnormal mind. These are Dr. George E. Shuttleworth, Director of the Ancaster House, Richmond, England, whose writings are of great value to teachers; Herr J. Trüper, Direktor der Anstalt für schwer erziehbare Kinder auf der Sophienhöhe bei Jena, in whose institution the writer was for a period of six months a frequent visitor, and Prof. Theodor Ziehen, of the University of Jena, whose inspiring and helpful course of lectures on pathological psychology it was the great good fortune of the undersigned to hear.

WILL S. MONROE.

WESTFIELD, MASS., Jan. 5, 1897.

FEEBLE-MINDED CHILDREN IN THE PUBLIC SCHOOLS.*

The degree of mental disorder which unfits a child to attend the public schools of the state has varied widely in point of time. Fifty years ago many children with minor psychical abnormalities—now considered proper subjects for special institutions—were freely admitted to the privileges of the common schools, so long as they did not seriously interfere with its even tenor, or jeopardize the lives and morals of the other children. And in many sections of our country to-day the child with deranged nervous mechanism, distorted perception, slight power of attention, uncertain memory, and weak will-power, is admitted to the same school and subjected to the same methods and course of study as the normal and healthy children in the community. State and private institutions † have entirely changed these conditions, but an experience of fifteen years as teacher and superintendent of public schools leads me to believe that the practice is yet all too common.

A few instances will suffice to illustrate this prevalence. A. was a lad of fourteen years; his mother of American and his father of English birth. He was found to be in a grade the average age of which was a little more than nine years, but he was not large for his age. His features were irregular and his gait unsteady; he was fidgety and inattentive in school, and possessed of a morbid stubbornness to such a degree that hostilities with his teachers were constant. He seemed incapable of study, and his moral perversity becoming so marked, the superintendent was asked to dismiss him from school. After a conference with the teacher, and a week or two of personal observation, it was decided that the boy was not "quite right," and that he ought to be placed in a special institution. The mother was consulted, and she gave many incidents in the boy's life which pointed strongly toward his imbecility; she was told of the superintendent's conclusion, and, while recognizing its justice, was unwilling to bring such disgrace on her family as that of having him committed to a home for the care and training of feeble-minded children. Within a year from the date of this conference, he committed an act which brought him within the power of the police, and the court sentenced him to a long term in a juvenile reformatory, where he has since been declared to be an imbecile.

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* Also read before the National Conference of Charities and Corrections at Nashville, Tenn., May, 1894.

† An admirable account of the growth of such institutions in America will be found in *The History of the Treatment of the Feeble-Minded*, by Walter E. Fernald, Boston, 1893. An account of European institutions will be found in *Rapport sur l'Assistance des Enfants idiots et dégénérés*, by Dr. Bourneville, Lyons, 1894.

B. was a girl of American parentage who entered school at the age of ten ; her father was consumptive, but her mother was a healthy but simple minded woman. The girl herself was of rather low nutrition. She was quick in movements, and at times highly excitable. The first evidence of defect noted by her teacher was a tendency to relate strange, improbable stories and these often in a disconnected manner, repeating the details over and over. By nature she was affectionate, and during the first two years of her school life she was fond of her teacher, and kept pace fairly well with the other members of her class. But promotion brought her in contact with a teacher she did not like, and in spite of watchfulness and solicitude on the part of an educated sister who was interested in her welfare, the girl's intellectual progress was at an end. Although kept in school the four subsequent years, she made no advance in her studies. She was frequently punished for failure to perform the simplest tasks, but to no purpose. Superintendent and teacher frequently discussed her work, but neither recognized her mental disorder. The solicitous sister, noting the child's tendency to waywardness and social failure, made frequent appeals to the superintendent, but he had no remedy to suggest. At sixteen years she had grown into an incorrigible woman, and it was found necessary to commit her to a home for wayward girls. After two years' detention, medical experts pronounced her unmistakably feeble-minded.

These may be extreme cases, but they typify at least one child observable in almost every public school of the land. Believing such abnormalities to be much more common in our graded schools than is usually supposed, I addressed letters of inquiry some months ago to several hundred public school teachers in California. I asked these teachers to observe the physical and mental defects of the children under their charge *

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* Dr. Osborne in an able address to the teachers of California remarks:

"How shall we detect true feeble-mindedness in school children?

"To answer this I must enumerate some of the characteristics and leading propensities of this grade. Perhaps the more noticeable characteristics of the truly feeble-minded child is the very childishness or immatureness of its acts, its expressions, and its demonstrative desires. Here is to be found an innocence that is strangely out of place with its environment, and whose lack of depth and breadth to its conception of the concerns of life is at variance with the opportunities which confront it. Thus its acts are in the main purposeless, or when directed to a purpose that purpose is found to be puerile. We have the body at sixteen directed by a mental consciousness scarcely greater than that of the normal child at six. In the majority of cases there will be found to exist some physical abnormality, blight, or peculiarity that will give you a clue to the retarded development of the brain and mind. The first of these to be mentioned is the exaggerated symmetry of the features. I may note here that no human being is anatomically symmetrical, and it is well that we are not, for if we were our present ideas of individual beauty and personal attraction would be leveled to the one type of a model that, from its absolute sameness in all individuals, would radically dispense with those facial contours which now give pleasing variety to our conception of individual charms and of personal beauty. The feeble-minded, therefore, are pretty sure to present exaggerations of these variations, sometimes to the degree of undue conspicuousness or perhaps downright repulsiveness. Test this by comparing facial lines and angles and the muscular development of the one side of the median line with the condition of affairs found on the other.

"The stature is, as a rule, under size. This is especially true of females, and in both sexes there exists a tendency to round shoulders—a stooping—that increases as they grow older. The gait is more or less shuffling, the step marked by a peculiar dragging of the feet, the whole body lacks graceful carriage, and the general progressive movements of locomotion and prehension are performed hesitatingly and with apparent lack of confidence. This state of affairs arises from the enfeebled or erratic muscular development and the inherent weakness of the will, whose and to send me their observations. These results, collated and condensed, are as follows.:

1.	No. of pupils observed.	10,842
2.	No. with irregularities in features.	318
3.	No. with irregularities in movements.	312
4.	No. with irregularities in speech.	345
5.	No. maimed or paralyzed.	98
6.	No. with history of "fits" during school life.	46
7.	No. of low nutrition—pale, thin, delicate.	754
8.	No. who are mentally dull in school.	1,054
9.	No. who are feebly-gifted mentally.	268
10.	No. of imbeciles and idiots.	6

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behests are responded to feebly and irregularly by the muscular system. In these movements there will be found to exist a lack of coördination, accounting for the deficiency shown in purposive acts. This also explains many errors in speech which are more or less defective from lack of coördination of the muscles involved in producing speech, from malformations of the speech organs and their auxiliaries, and lastly, from the inability of the nerve cells in the speech areas of the brain to convert. readily, mental impressions into ideas, and ideas into the correct word representatives.

"Sensibility, for obvious reasons, falls far below the normal standard, not only as to tactile sense, but in their tolerance of pain as well. In the grade of cases usually found in institutions, this deficiency is marked. They will often mutilate themselves with indifference, and will most complacently undergo minor surgical and dental operations that would cause acute sufferings to those of normal nervous development. I have known a gross, plethoric, feeble-minded girl to fall asleep during the extraction of a number of decayed teeth; another to sit with calm indifference under the accumulative horrors of having decayed teeth excavated, the nerve pulp destroyed, and the cavity chemically cleansed.

The cranium, as might be expected, shows divergence from a normal type, heads being very big or very little, very long and narrow, or flattened posteriorly. The external appendages of the ear lack conformity to the usual type in texture, size, and shape. The mouth is so frequently relaxed and open that this constitutes a prominent sign. Associated with this condition is the drooling, the slavering of the lower types, and the forcible projection of spittle in the efforts to talk under strong excitement met with in the higher types.

"The memory is nearly always weak and unreliable. The faculty of observation is limited within the more elementary lines, and attention is both difficult to fix and hard to hold without unusual efforts on the part of the teacher. The imagination is very crude. Such children are capable of the most meager abstract thinking, and their powers of judgment aberrant to a degree: they act impulsively, and without reason, because the fundamental principles of potentiality in this respect are inactive—inert.'

The test is in no sense scientific or conclusive, but it is suggestive in at least this—that there are many children in our public schools who could be more economically and wisely trained in special institutions than in the state schools where they now are, and many more who, although not positively feeble-minded, skirt the border land of abnormality, and because of their large numbers—nearly ten per cent. of the whole public school enrollment—should receive the thoughtful attention of teachers and specialists. [*]

Irregularities in feature may arise from causes wholly independent of mental disturbances, and unless associated with asymmetry cannot be taken as diagnostic of mental defect; but when associated with irregularities in movement and speech, they do indicate infantile palsies and cerebral troubles, which must have retarded the development of the tissues and functions. Over three per cent. of the more than ten thousand California children observed bear these blemishes.

"Number with history of fits during school life," was not an easy question to answer, because of the fact that children rarely continue with one teacher more than a single year, and teachers, in the city schools at least, know little that happens in the homes. But the number is sufficiently large to indicate the presence of many epileptics in our public schools.

Of those with low nutrition—pale, thin, and delicate—the large number—nearly seven per cent.—establishes the fact that a great many school children are neurasthenic—suffering from nervous strain with all its reactionary vices upon the training and development of minds and bodies.*

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[*] For the characteristics of mental deficiency in childhood see:

Mentally Deficient Children: Their Care and Training. By George E. Shuttleworth. London, 1895.

Psychopathische Minderwertigkeiten im Kindesalter: Ein Mahnwort für Eltern, Lehrer und Erzieher. Von J. Trüper. Gütersloh, 1893.

Manuel Pratique des Méthodes d'Enseignement Spéciales aux Enfants abnormaux. Par Hamon du Fougeray et L. Couëtoux. Paris, 1896.

An excellent bi-monthly journal (in German) is now being published at Langensalza. It is edited by Dr. J. L. A. Koch of Würtemburg, Chr. Ufer of Altenburg, Professor Zimmer of Herborn, and J. Trüper of Sophienhöhe bei Jena. It is entitled *Die Kinderfehler: Zeitschrift für Pädagogische Pathologie und Therapie in Haus, Schule, und Socialem Leben.*

Regarding the "mentally dull in school," Dr. E. A. Osborne, Superintendent of the California Home for the Care and Training of Feeble-minded Children, and a specialist of high repute, writes me: "I am astonished at the number of mentally dull—ten per cent., I am sure from my experience with census statistics that these figures are below what a specialist would give were all the children (10,842) to pass before his inspection. It indicates two things at least; first, that children of feeble minds are found in all the schools, but probably unrecognized as truly mentally abnormal, and, second, that we must change some of our old ideas regarding proper educational benefits for the feeble-minded. It is easy to surmise that fully ten per cent. of your 10,842 children are incompetent or defective in some degree."

From these statistics, two things seem to me especially needful; first, instruction which will acquaint our teachers with the characteristics of mental defects and disorders,† and second, such general discussion of the needs and methods of training feeble-minded children that the prejudices of parents may be overcome. A long experience teaches me that every school of fifty pupils has at least one child that can be better and more economically trained in the special institutions than in the public schools. Kept in graded schools as they are, with teachers who have little knowledge of their condition, and no appreciation of their needs, they leave these schools and take prominent rank among the paupers, social failures, and criminals. But what of the remaining eight or nine per cent. who are yet much below the general average ? Are they to overcrowd our special institutions, by adding to the state's burden ? Or are they to remain a hindrance to the ninety or more per cent. of normal children of the community ? In the larger cities and towns, some segregation would be possible, where a specialist might take small classes of the "mentally dull" and "feebly-gifted mentally," and give them such individual instruction as their peculiar defects required. In Norway, I am told, there are such schools for exceptional children, and that in these schools no teacher is permitted to have more than twelve children under her care.* Why not have such schools in the United States ?

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* Dr. Walter E. Fernald says in this connection: "As a rule these children come to us in poor physical condition. They need generous feeding with the most nutritious food in good variety, but in the plainest sort, such as good bread and butter, cereals, an abundance of pure milk, meat at least once a day, preferably in the form of soluble soups and broths, and a liberal supply of fresh vegetables. . . . . Their digestive and assimilative functions are so imperfectly performed that they often actually need a much larger ration than would a normal person."

† In the normal schools in Germany, as a part of their professional training, the students have a course of instruction in the education of defective children.

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* Such schools were organized in London nearly seven years ago, and were recently visited by the writer. Five hundred mentally dull children are organized into special classes, and these are under the supervision of a specialist. No teacher of the mentally dull is permitted to have over twenty children under her care, and the methods of teaching used are those usually found in institutions for feeble-minded children. When a teacher concludes that a pupil is too feeble, mentally, for the work of the ordinary school, she reports the matter to the superintendent of the schools for the mentally dull children, who, together with the medical adviser of the public schools, diagnoses the case ; and if they find the teacher's judgment to be correct, the child is transferred to a mentally dull class. These classes are in the same school building with the normal children.

OTHER WRITINGS BY WILL S. MONROE ON THE EDUCATION OF DEFECTIVE CHILDREN.

1. Education of Feeble-Minded Children in California. *Pacific Educational Journal*, Oakland, April, 1894.
2. The same reprinted in pamphlet form, pp. 8. Oakland, 1894.
3. The same reprinted in *The Institution Bulletin: Quarterly Announcement of the California Home for the Care and Training of Feeble-Minded Children*, Sacramento, May, 1894.
4. Education of the Deaf and Blind Children in California. *Pacific Educational Journal*, Oakland, May, 1894.
5. English Institutions for the Feeble-Minded. *The Institution Bulletin: Quarterly Announcement of the California Home for the Care and Training of Feeble-Minded Children*, Sacramento, February, 1895.
6. A Parental (Truant) School. *Journal of Education*, Boston, March 26, 1896.
7. Die Pflege und Entwicklung der Abnorme Kinder in den Vereinigten Staaten von Nordamerika. *Die Kinderfehler: Zeitschrift für Pädagogische Pathologie und Therapie*, Langensalza, 1896.

Sammlung gemeinverſtändlicher wiſſenſchaftlicher Vorträge,

herausgegeben von

Rud. Virchow und **Fr. v. Holtzendorff.**

II. Serie.
(Heft 25—48 umfaſſend.)

Heft 29.

Waiſenpflege und Waiſenkinder in Berlin.

Von

R. Zelle.

Berlin, 1867.
C. G. Lüderitz'ſche Verlagsbuchhandlung.
A. Chariſius.

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über die

Sammlung gemeinverſtändlicher wiſſenſchaftlicher Vorträge,

herausgegeben von

Profeſſor Dr. **R. Virchow** und Profeſſor Dr. **Fr. v. Holtzend**

II. Serie. Heft 25—48 od. Jahrgang 1867.

Der unermeßliche Aufſchwung, welchen die Volksbildung in den letzten
genommen, hat auch das Bedürfniß nach den Mitteln der Belehrung geſt
Mit beſonderer Vorliebe hat man ſich überall dem lebendigen Worte und
Vortrage der Lehrenden zugewendet. Der Werth eines die Schule ergänzende
wichtigſten Ergebniſſe der heutigen Wiſſenſchaft gemeinverſtändlich erſchließ
Unterrichts wird namentlich innerhalb der arbeitenden Klaſſen lebhaft empf

Aber auch dem Bedürfniß der Mittelklaſſen iſt, gegenüber dem une
ſchnellen Gange der immer wieder neu werdenden Wiſſenſchaft, die bei
herrſchenden Geſetz der Arbeitstheilung ſelbſt Fachgelehrte kaum in ihrem g
Umfange zu überblicken vermögen, durch die vorhandenen Bildungsmitte
neswegs genügt. Vielfach zeigt gerade die populäre Literatur eine g
Neigung zur Verflachung, indem eine verhältnißmäßig zu geringe Zahl
unterrichteten Männern die Vermittlung zwiſchen der gelehrten Forſchung
dem allgemeinen Wiſſen übernehmen muß, und ſchon das iſt eine üb
dankenswerthe Aufgabe, daß neue und bewährte Kräfte aus den Kreiſe
eigentlichen Fachgelehrſamkeit zur Mitwirkung an der großen Arbeit der
bildung beſtimmt werden. In keinem der Culturvölker iſt in dieſer Ric
ſo wenig geleiſtet worden, als in Deutſchland, wenngleich einzelne glän
Beiſpiele darthun, daß unſere Nation in keiner Weiſe zurückzuſtehen bra

Dieſe Wahrnehmung veranlaßte die unterzeichnete Verlagsbuchhan
zu dem Unternehmen, eine Reihe von gemeinverſtändlichen wiſſenſchaft
Vorträgen vom Januar 1866 ab erſcheinen zu laſſen, deren Redaktion,

Sammlung
gemeinverſtändlicher
wiſſenſchaftlicher Vorträge,

herausgegeben von

Rud. Virchow und **Fr. v. Holtzendorff.**

II. Serie.

(Heft 25 — 48 umfaſſend.)

Heft 29.

Berlin, 1867.
C. G. Lüderitz'ſche Verlagsbuchhandlung.
A. Chariſius.

Waiſenpflege

und

Waiſenkinder in Berlin.

Von

R. Zelle,
Stadtrath in Berlin.

Berlin, 1867.
C. G. Lüderitz'ſche Verlagsbuchhandlung.
A. Chariſius.

Das Recht der Ueberſetzung in fremde Sprachen wird vorbehalten.

Berliner Waiſenkinder hat es gegeben, ſo lange die Stadt ſteht; allein aus den älteſten Zeiten ſind faſt gar keine Nachrichten über ſie vorhanden. Bekanntlich hatte die ganze Armenpflege des Mittelalters in der Kirche ihren Ausgangspunkt und ihren Halt. Kirchliche Stiftungen ſind namentlich die Hospitäler, von denen das Heiligen-Geiſt- und St. Georgen-Hospital unter dem Namen „Armenhöfe“ ſchon im 13. Jahrhundert genannt werden. Ein Armenhof ſcheint auch das Gertrauten-Hospital geweſen zu ſein, deſſen Kapelle 1405 geſtiftet iſt. Im Jahre 1484 endlich entſtand, als Grundlage des ſpäteren Hospitales, die Jeruſalems-Kapelle, welche ein Berliner Bürger des noch heute in Berlin reichlich blühenden Namens Müller zum Andenken an ſeine Wallfahrt in's gelobte Land errichtet hatte.

Von der näheren Einrichtung und Benutzung der Hospitäler oder Armenhöfe wiſſen wir wenig. Vielleicht ſind mit den anderen Kranken und Armen auch arme Waiſenkinder darin verpflegt worden. Bei der Waiſenhauskaſſe wird noch heute ein ſ. g. Bürgerwaiſenfonds verwaltet, von deſſen Urſprung und Beſtimmung faſt nichts mehr aus den Acten erhellt. Nur ſo viel iſt zu erſehen, daß in alter Zeit aus den Zinſen drei Waiſenkinder von der Hausmutter des Heiligen-Geiſt-Hospitales zu verpflegen waren.

Eine Erwähnung der Waiſenkinder in den vielen geiſtlichen

Stiftungen, die im Mittelalter zu Berlin errichtet wurden, iſt nicht überliefert. Wohl aber pflegten die Brüderſchaften und die Zünfte, in welche ſich die Handwerksmeiſter abſchloſſen, für Wittwen und Waiſen ihrer verſtorbenen Mitglieder zu ſorgen. Eine geregelte Armenpflege im heutigen Sinne war überhaupt damals nicht vorhanden. Anſtatt deſſen findet ſich das als Regel, was heute von der Verwaltung bekämpft und von den Gerichten beſtraft wird: das Betteln. Für die grauen und ſchwarzen Mönche in Berlin war das nicht bloß von der Kirche erlaubt, ſondern es galt als Ehre und Beruf. Der Spruch der Minoriten hieß:

„Der Minorit ſoll nit ſtudier,
Der Bettelſack iſt ſeine Zier.“

Almoſenſammeln iſt unſer Erbe, hatte ihnen der heilige Franciskus vorgeſchrieben, iſt die Gerechtigkeit, die uns Chriſtus erworben, es iſt unſere königliche Würde. Keiner ſchäme ſich zu betteln, ihr müßt dreiſt fordern.

Nach dem Vorbilde der damals höchſten Autorität bettelte denn auch friſch und frei, was ſonſt Bedarf hatte. Ja, das Betteln wurde privilegirt. Bürger, die ihre Habe durch Feuersbrunſt verloren hatten, erhielten einen förmlichen Schein von ihrer Stadtbehörde, um im Lande auf den Brand zu betteln, und den Waiſenkindern ſcheint ſchon in alter Zeit der Vorzug gegönnt zu ſein, daß ſie bei Hochzeitsſchmäuſen erſcheinen und Gaben einſammeln konnten. In dem Beſtätigungsbriefe der Berliner Kalands-Brüderſchaft oder Elendsgilde ſagt der Biſchof von Brandenburg 1344, viele heimathloſe und ſchwache Prieſter hielten ſich ohne Unterhalt, Obdach und faſt von aller menſchlichen Hülfe verlaſſen auf den Kirchhöfen von Berlin und Kölln auf, wo ſie vor Hunger, Durſt und Kälte faſt umkämen. Auch ſonſt wird uns berichtet, daß fahrende Schüler und Arme auf dieſen Kirchhöfen ihren Wohnplatz aufſchlugen. Man dürfte kaum fehlgreifen, wenn man die große Menge der damaligen Berliner Waiſenkinder des Nachts auf dem Nicolaikirchhof aufſucht, wie ſie ſich im Graſe der Gräber zum Schlafen kauern, und bei Tage auf den kothigen Straßen, wie ſie den Mönchen, Greiſen und armen Weibern den Rang im Betteln abzulaufen ſuchen. Es wird mit dieſen Kindern in Berlin nicht viel anders geweſen ſein, als mit denen zu Homer's Zeit, die der Dichter ſo rührend beſchreibt:

> Siehe, der Tag der Verwaiſung beraubt ein Kind der Geſpielen;
> Immer ſenkt es die Augen beſchämt mit Thränen im Antlitz.
> Darbend geht das Kindlein umher zu den Freunden des Vaters,
> Fleht und faßt den einen am Rock, den andern am Mantel;
> Aber erbarmt ſich einer, der reicht ihm das Schälchen ein wenig,
> Daß er die Lippen ihm netz' und nicht den Gaumen ihm netze.
> Oft verſtößt es vom Schmauſ' ein Kind noch blühender Aeltern,
> Das mit Fäuſten es ſchlägt und mit kränkenden Worten es anfährt:
> Hebe Dich weg! Dein Vater iſt nicht bei unſerem Gaſtmahl! —
> Weinend geht von dannen das Kind . . .

Mit der Reformation iſt eine beſſere Ordnung in das Berliner Armenweſen gekommen. Schon der Viſitationsrezeß vom 15. Auguſt 1540, betreffend die neue Einrichtung des evangeliſchen Gottesdienſtes in Berlin, nimmt ſich der Sache an, namentlich durch Feſtſtellung einer allgemeinen Armenkaſſe, des ſ. g. Gemeinen Kaſtens. „Es ſoll", heißt es, „der Rath den Gemeinen Kaſten mit etlichen geſchickten Vorſtehern verſorgen, die jeden Feiertag in der Kirche mit dem Säcklein umgehen und der gemeinen Armuth zu Gute bitten ſollen." Auch mehrere geiſtliche Stiftungen, namentlich Altarlehen, fielen dieſer Armenkaſſe anheim, die nun bis 1695 den Mittelpunkt der öffentlichen Armenpflege bildete.

Daneben ſpendete der Magiſtrat außerordentliche Gaben für Arme und Nothleidende, und hier finden wir auch die Waiſen ausdrücklich erwähnt. Im Jahre 1555 weiſen die Rechnungen der Kämmereikaſſe 7 Findlinge und Waiſen auf, die meiſt zu 2 Gulden pro Vierteljahr in Pflege ausgethan wurden. 1569 erhielt Frau Barbara 6 Gulden für das Säugen eines gefundenen Kindes. 1571 wird für ein Waiſenkind außer 6 Gulden noch 1 Scheffel Roggen bewilligt. Nach und nach findet ſich auch freie Bekleidung erwähnt, und ſelbſt der pädagogiſche Theil der Waiſenpflege iſt in einem Rechnungsposten von 1574 nachgewieſen, wo 1 Groſchen 6½ Pfennige für ein ABC-Büchlein verzeichnet ſtehen. Wo die Kinder untergebracht wurden, iſt ſelten erwähnt. Zuweilen werden Gerichts- und Raths-Diener genannt, welchen auch Gefangene und Bettler zur Aufbewahrung übergeben zu werden pflegten.

Uebrigens war die Bettelei mit dem Viſitationsrezeß und der Einrichtung des Gemeinen Kaſtens noch keineswegs abgeſchafft. Nur den „ſtarken, faulen“ Bettlern ſollte das Betteln unterſagt und die fremden ſollten aus der Stadt verwieſen werden. Für die übrigen wurden die, ſchon 1486 verordneten, Bettelzeichen bewilligt, die ſie zur Legitimation am Hut oder an dem, aus grober Leinwand gefertigten Schleier zu tragen hatten. Eins vom Jahre 1587, deſſen Abbildung erhalten iſt, zeigte, von Meſſingblech geprägt, in der Mitte den nach rechts ſchreitenden Bären [1]) mit dem Halsbande und trug die Umſchrift: Gebet den Armen zu Berlin.

Faſt alle 5 Jahre mußten neue Edicte wider die fremden Bettler und Landſtreicher, Pracher, Landsknechte und loſen Buben erlaſſen werden. 1596 ſtellte der Rath von Berlin und Cölln eine neue umfaſſendere Bettel- und Armen-Ordnung feſt, deren Vorſchriften ein ganzes Jahrhundert hindurch weſentlich maßgebend blieben. Hierin wird auch der Waiſen- und anderer armer und verlaſſener Kinder gedacht. Die Mägdlein ſollen zur Weibsarbeit, inſonderheit zum Spinnen, Nähen und Wirken angehalten, und wenn ſie ſtark genug geworden, für Kindermägdlein in der Stadt oder auf den Dörfern vermiethet werden. Den Knaben ſollen die Vorſteher des Armenkaſtens die Fibeln und andere Bücher ankaufen, und hernach, wenn ſie beten lernen, ſollen ſie in die Currende eingenommen werden. Dieſe Currendeknaben, heißt es weiter, ſollen auf den Gaſſen nach der gewöhnlichen Ordnung die Reſponſoria, auch deutſche Pſalmen, von 10—11 Uhr ſingen, das Brot in Körben, das Geld in verſchloſſenen Büchſen ſammeln, welches ihnen monatlich diſtribuirt werden ſoll. Zu dem, was ſie in den Körben bekommen, iſt aus dem Einkommen der Schulen wöchentlich Brot zuzulegen. Auch Mittwochs Nachmittags, wenn ſie in den Schulen veniam haben, dürfen ſie auf den Gaſſen und vor den Thüren figural ſingen. Das eingeſammelte Geld wird vom Rector diſtribuirt oder zum Ankauf von Büchern und Papier verwendet. So ſoll auch, wird ferner beſtimmt, denſelben Schülern, ſo in der Cantorei ſind, inſonderheit zugelaſſen ſein, auf Hochzeiten, nach Gelegenheit der Hochzeitsgäſte, in jedem Gemach, da Mannsperſonen ſitzen, ein Stück oder vier zu ſingen, und was ſie an Gelde erhalten, in die Büchſen zu ſtecken, und wenn ſie ausgeſungen, wieder davon eilen, daß ſie deſto zeitiger wieder in die Schule kommen und ihres Studiums warten können, nicht aber, wie oft geſchieht, in den Hochzeiten bleiben, ſich voll ſaufen, auch wohl neben anderen gebetenen Gäſten tanzen und andere Ueppigkeiten treiben. Welche ſolches thun, ſollen vom Herrn Rectore nicht allein darum caſtigiret werden, ſondern auch ihres Antheils am erſungenen Gelde verluſtig gehen.

Die Verordnung erwähnt ſodann der armen Schüler, „ſo keine Herberge haben", und weiſt die Bettelvoigte und Todtengräber an, die Mägdlein und Jungen, welche nicht in die Schule gehen, und vor den Thüren liegen und betteln, wegzujagen, und da ſie ſich nicht packen wollen, mit den Peitſchen, die ihnen die Räthe geben werden, abzutreiben. Gebrechliche wahrt wurden, 134 Soldatenkinder. 1719 ſtellten die Commiſſarien vor, daß das Haus mit dieſen faſt gänzlich angefüllt würde. Aber der Soldatenkönig Friedrich Wilhelm I. antwortete höchſteigenhändig: „Sie ſollen unterhalten 300 Soldatenkinder; fournituren, nämlich Betten und Bettgeſtelle, Kleidung, Haus- und Tiſchgeräth für ſo viel Kinder ſollen ſie machen laſſen. Ich bezahle. Die Koſt ſoll's Hospital bezahlen.“ Und im nächſten Jahre ſchrieb er: „Ich hoffe mit der Zeit 500 Kinder zuſammen zu kriegen. Das Geld wird mir der liebe Gott beſcheeren.“

Die Kaſſenrechnungen ergaben übrigens, daß von Anfang an neben der Anſtalts-Pflege auch Koſt-Erziehung der Waiſen beſtand. Schon ſofort nach Stiftung der neuen Armenkaſſe, 1696, wurden 26 bürgerliche und 17 Soldatenwaiſen bei „guten Leuten“ verdungen, und nachdem 1701 das Waiſenhaus 98 Kinder aufgenommen hatte, blieben noch 32, die jüngſten, in Koſt. Bald gewährte man auch armen Wittwen auf ihre Kinder aus der Armen-Kaſſe ein regelmäßiges Pflegegeld.

Schon vor der Mitte des vorigen Jahrhunderts wurden nach und nach die Irren, Arbeitsſcheuen, Kranken, in andere, neu gegründete Anſtalten untergebracht. Gegen Ende des Jahrhunderts ſtarben die letzten armen alte Leute aus, die neben den Waiſenkindern im Friedrichs-Hospital Aufnahme gefunden hatten. Von jetzt an war das Haus ausſchließlich Waiſenhaus (und hieß auch ausſchließlich ſo), bis 1859 die Communalbehörden die Waiſenanſtalt nach Rummelsburg verlegten. Nun ward der größere Theil des Gebäudes den Hospitaliten des Arbeitshauſes eingeräumt. In dem anderen blieb, neben Beamtenwohnungen und den Bureaux für die Waiſenverwaltung, das ſ. g. Depôt, beſtimmte Lokalitäten, die zur erſten vorläufigen Aufnahme ſämmtlicher der ſtädtiſchen Waiſenpflege anheimfallender Kinder dienen.

Die Rummelsburger Anſtalt liegt ſüdöſtlich von Berlin, nur 20 bis 30 Minuten vom Stralauer oder Frankfurter Thore entfernt. Friſch und freundlich erheben ſich ihre Häuſer zwiſchen Buſchwerk und Bäumen, Gartenland und Raſenplätzen. Grünes Ufer am blauen Rummelsburger See; drüben Spreeinſeln und die bekannten und vielbeſuchten Dörfer Stralau und Treptow; im Oſten die große Haide, die ſich bis zur Stadt Köpenick hinzieht.

Die Anſtalt, nur durch eine niedrige Hecke begrenzt, iſt von allen Seiten frei zugänglich. Auf den erſten Blick glaubt man, ein Terrain vor ſich zu haben, auf dem eine Colonie Sommerhäuſer angeſiedelt iſt. In der Mitte dieſer Häuſer erhebt ſich das Hauptgebäude, in welchem die Kirche, der Saal für Feierlichkeiten, und die Wohnungen für den Director, den Arzt, den Prediger und den Hausvater befindlich ſind. Außerdem haben die Mädchen der Wirthſchaftsabtheilung dort ihren Schlaf- und Arbeitsſaal. Nach dem Willen der Communalbehörden werden nämlich die Rummelsburger Mädchen nicht ſchon mit 14, ſondern erſt mit 15 Jahren entlaſſen. Das letzte Jahr wird, neben Unterricht in zweien Klaſſen, dazu verwendet, ſie in allen Hausarbeiten und im Kinderwarten zu üben. Zu Letzterem bietet ſich reiche Gelegenheit durch die „Kinderſtube", welche, im nächſtgrößten Gebäude befindlich, die Kinder bis zum ſchulpflichtigen Alter enthält. In demſelben Gebäude liegt die Küche, die Waſchküche, das Lazareth, die Station für chroniſch kranke Kinder, das Badezimmer (für den Winter) und der Maſchinenraum zur Bereitung des Dampfes und warmen Waſſers für die Küchen und die Bäder. Die Häuſer für die Kinder ſind für Familien von je 50 eingerichtet, die unter einem Erzieher oder einer Erzieherin und deren Gehülfen oder Gehülfinnen ſtehen. 5 Knaben- und 2 Mädchen-Häuſer exiſtiren. Die Knaben werden in 5, die Mädchen in 2 ſubordinirten Klaſſen unterrichtet. Für den Turnunterricht beſtehen Turnplatz

Singen der Waiſenkinder Leibes- und Geiſteskrankheiten heilen könne. So findet ſich in den Rechnungen des Nordhäuſer Waiſenhauſes: „2 Groſchen, hiermit erſuche ich Gott, mir doch dasjenige zu verleihen, worum ich ſo oft bete, 2 Geſänge; ½ Laubthaler wegen einer Jungfrau, die verläumdet worden, 7 Geſänge; 4 Groſchen für einen Mann mit böſen Augen; 1 Groſchen um Befreiung von Zahnweh; 8 Groſchen daß Gott dem Geber den heiligen Geiſt und Glauben ſchenke."

Bei der Erziehung trat der Schul-Unterricht ſehr in den Hintergrund. Deſto ſorgfältiger finden wir die Straf- und Zuchtmittel vorgeſehen. Eine Verordnung von Frankfurt a. M. beſagt: da die Knaben die bisherige Züchtigung mit der Karbatſche nichts achteten, ſei beſchloſſen, ſie mit Fußſchellen zu ſchließen und mit Waſſer und Brot auf einige Zeit zu ſpeiſen. Wo dies nicht half, kamen noch ſchärfere Mittel in Anwendung. „Eine Zuchtbank, dadurch der Züchtling Kopf und Arme ſtecken und alſo geſchloſſen werden kann, um ſolchergeſtalt geſtrichen zu werden. Item, ein hoher Stock, daran der Zögling angebunden und geſtrichen wird. Item, ein Bärenkaſten, mit eitel ſcharfen Ecken, darinnen man nicht bequemlich ſtehen, liegen noch ſitzen kann. Item, dunkle Gefängniſſe unter der Erden, eins ärger als das andere."

Die Zeit iſt längſt vorüber, wo man nicht wußte, ob man die Züchtlinge im Waiſenhaus, oder die Waiſen im Zuchthauſe ſuchen ſollte. Solche Kummer- und Hunger-Anſtalt, wie Salzmann ſie beſchreibt, wird heute in ganz Deutſchland nicht mehr zu finden ſein. Auch in Rummelsburg ſucht man vergebens „kalkweiße, ausgezehrte Gerippe, Spinnräder und Bärenkaſten." Im vorigen Sommer ſagte ein Knabe: „ach, Herr Director, wie danke ich doch dem lieben Gott, daß ich keinen Vater und keine Mutter mehr habe." Daß die Kinder in Rummelsburg nicht verzärtelt und verwöhnt werden, verſteht ſich von ſelbſt;

ebenſo verſteht ſich, daß man ſie nicht zum Zwecke des
erwerbes arbeiten läßt. Die Koſten der Stadtkaſſe berech-
ſich pro Kind und Jahr auf 115 Thaler.

Wo kommt nun das Material her, das die Rummelsbur-
Anſtalt in Arbeit nimmt? In dem Stadtviertel, wo die
ſtühle klappern, in der Gollnow- oder Weberſtraße oder
Grünen Weg, wo längſt kein Grün mehr zu ſehen iſt, wohnt
Hinterhauſe drei Treppen hoch der Raſchmachergeſell mit
r Familie. Der Vater geht Morgens früh auf Arbeit, die
tter auf Aufwarteſtellen und zum Waſchen, und der Junge
mt ſeine „Schrippe“ 2) und geht zum Rinnſtein. Der Rinn-
iſt Alles, was Natur und Kunſt ihm bieten. Am Rinn-
findet er im Frühjahr die „Kuten“ 3), um „Murmel“ zu
en mit ſeinen barfüßigen Kameraden, im Rinnſteinrand
nzt er die Erbſe ein, die er ſeiner Mutter abgebettelt, in
Rinnſtein baumelt er die Füße, wenn ein Gewitterregen
ang ſtrömt, durch die Rinnſteinbrücke läßt er die Eierſchale
immen, die er in der trüben Fluth gefiſcht hat, im Rinn-
gründelt er nach dem Dreier 4), den einem Gerüchte nach die
hin aus dem Vorderhauſe hat hinein fallen laſſen, auf dem
nſtein macht er ſich die Schlitterbahn zurecht, wenn ihm eines
termorgens die anderen Jungen entgegen rufen: es hält! es
! Aber eines Tages kommt ein großer Junge mit einem lei-
n Sack voll graßgrüner Aepfel und Birnen. Er erzählt von
Prenzlauer Chauſſee, wo das Alles an den Obſtbäumen wächſt,
man bloß zu ſchütteln braucht, aber wo auch ein Wächter
irt iſt, der furchtbar zuſchlägt, wenn er einen Jungen faßt.
n hungrigen Sohne des Raſchmachergeſellen wäſſert der Mund
das Vagabondiren geht an. Da ſagt eines Tages der Vater:
utter, wir werden alt und quälen uns, und der Junge läuft
ſig herum; er ſoll mit verdienen; er ſoll auf den Rollwa-
.“ Hier vertritt der Knabe fortan für 1 Silbergroſchen täg-

lich die Stelle des Hundes. In Hitze und Kälte, in Regen und Sonnenſchein ſitzt er hier zwiſchen Kiſten und Fäſſern ſeinen Tag ab, unter dem ſouverainen Regimente des Rollknechtes, der den Wagen dirigirt und bald ein Stück Butterbrot austheilt, bald Prügel, wie es ihm ſeine Gemüthsſtimmung heißt. Eines Abends kann der Junge nicht einſchlafen, weil die Mutter ſo ſehr huſtet. Der Vater ſagt, ſie hat ſich zu viel gethan bei der letzten Wäſche. Aber morgen Nacht iſt wieder Wäſche. Darauf huſtet die Mutter noch ſchlimmer; ſie bleibt im Bette liegen, und nach 8 Tagen iſt es mit ihr aus. Von da ab kommt der Vater ſpäter nach Hauſe, als ſonſt. Oft hört ihn der Junge vor ſich hin murmeln, und ein Mal ſieht er ihn taumeln, ehe er ſich in's Bett wirft. Dem Jungen bangt's vor ſeinem Vater. Die Kammer riecht nach Branntwein, wenn er kommt. Eines Nachts findet er ſich gar nicht ein. Er iſt unterwegs gefallen und hat ſich den Kopf zerſchlagen, und nach 3 Tagen ſagt ein Nachbar: er liegt in der Charité und er ſoll auch ſchon todt ſein. Der Junge läuft hin und erfährt, es iſt richtig. Er läuft zur Nachbarsfrau. „Futtern können wir Dich nicht, Auguſt, ſo gern wir möchten; wir werden ſelber nicht ſatt. Frage beim Kaufmann, wo der Armen-Director 5) wohnt, dann kommſt Du in's Waiſenhaus."

Aehnliche Vorſtudien des Lebens haben die meiſten Kinder gemacht, die nach Rummelsburg kommen; manche noch weit ſchlimmere; nicht bloß im Dunkel der Gollnowſtraße und Hirtengaſſe, ſondern unter den Augen des „gebildeten" Publikums, in den Horden Jungen, die einem „Pietſch" 6) nachlaufen und ſo ſchrillend pfeifen können, und am Schloße, wo uns die kleinen Mädchen zum lieben Weihnachtsfeſte Abends aus den Ecken entgegenrufen: einen Dreier das Schäfchen. — Der Knabe G. war 9 Jahr alt, als er der Anſtalt übergeben ward, und hatte bis dahin nur ſeiner einäugigen und lahmen Mutter

Lumpen ſammeln geholfen. Zuerſt ſpielte er den Schwerhörigen und wußte eine lange Geſchichte von der Entſtehung dieſes Fehlers zu erzählen. Auch nachdem er hierbei entlarvt war, ſprach er nie ein wahres Wort. Er aß und geberdete ſich wie ein Thier; Nachts ſchlich er ſich aus dem Hauſe, um rohe Kartoffeln und Kohlrübenſchalen zu verſchlingen, die er draußen vergraben hatte. „Unreinlich und gefräßig, ſagt der Bericht der Direction, iſt er ganz wie ein Affe. Dieſem Thiere gleicht er auch an poſſenhafter Frechheit, ſobald man irgend in mildem Tone zu ihm ſpricht. Es wurde auch der Verſuch gemacht, ihn einem ernſten und zuverläſſigen Knaben zur beſtändigen Beachtung beizugeben; aber dieſen wußte er fortwährend zu überliſten. Er ſtiehlt, wo und wie er kann." — Auch über die Mutter wird geklagt. Sie kam hartnäckig in die Anſtalt und lärmte und zankte mit den Erziehern, weil dieſe nicht zugeben wollten, daß ſie ein Geheimmittel bei dem Knaben in Anwendung brächte. Sie behauptete nämlich, bei Gelegenheit ſeiner Taufe habe einer der Pathen in den Schmutz getreten. Hiervon ſtamme die Unreinlichkeit des Knaben her, die ſie nun vermittelſt irgend einer Manipulation mit einem Schweineſchwanze curiren wollte. — Fünf Jahre nachher wird G. confirmirt entlaſſen. Er hat es bis zur 3. Klaſſe gebracht, und ſein Abgangs-Zeugniß lautet durchgängig gut. Er bildet, ſagt die Direction dabei, ein erfreuliches Beiſpiel, wie aus einem ganz verthierten, unſäglich laſterhaften Kinde unter gehöriger Zucht und Pflege ein ordentlicher, verſtändiger und brauchbarer Menſch werden kann. Er ſollte zu einem Klempner in die Lehre kommen, aber hier war noch eine eigenthümliche Schwierigkeit zu überwinden. Der Contract mußte mit dem Vormunde abgeſchloſſen werden, den der Meiſter erſt nach vielen Bemühungen ermitteln konnte. Er fand ihn endlich, wie er berichtet, im ſ. g. Todtſchlag bei der Jungfernhaide, auf einem

Heuboden logirend. Zum Herunterkommen war er nicht zu bewegen, und noch entſchiedener lehnte er jeden Gang nach der Stadt ab, da er weder Rock, noch Weſte, noch Stiefel beſitze, und ſich ſo in der Stadt nicht könne ſehen laſſen. So war der Vormund des Knaben G. beſchaffen, der nun ſchleunigſt durch einen andern erſetzt wurde. —

Der Schuhmachergeſell D. war ſchon lange vor ſeinem Tode ein verlorner Mann. Krank und arbeitsſcheu ſchleppte er ſich als Bettler umher. Seine beiden Töchter nahm er mit ſich von Dachkammer zu Dachkammer, und wenn er exmittirt wurde, in den Friedrichshain unter's Gebüſch. Ein Mal vergaß er ſie Morgens in einem Kartoffelfelde. Als er geſtorben war, kamen ſie in's Waiſenhaus, und nun findet ſich auch eine Nachricht über die Mutter vor. Der Vormund ſchreibt: „Dieſe Mädchen ſind ſo frech und ausgeartet, daß es ſchwer halten wird, eine Aenderung in ihnen hervorzubringen, ganz wie die ſelige Mutter.“ In dem Abgangszeugniß der älteſten heißt es denn auch: „In ihrem äußeren Verhalten gegen ihre Vorgeſetzten iſt ſie freundlich und beſcheiden, aber in dem Verkehr mit ihren Mitſchweſtern zänkiſch und unverträglich. Durch ihre Leiſtungen bei der Arbeit hat ſie ſich meiſt immer Unzufriedenheit zugezogen; ſie iſt nachläſſig und träge. Ihre bisherige Führung läßt für ihr künftiges Leben wenig Gutes hoffen.“ — Die Rummelsburger Anſtalt ſucht mit den entlaſſenen Kindern, namentlich den Mädchen, die Verbindung möglichſt aufrecht zu erhalten. Des Sonntags Nachmittags und Abends wartet ihrer eine freundliche Aufnahme mit einfacher Bewirthung, und die Erzieherinnen gehen ihnen nach, um bei den Dienſtherrſchaften über ihre Führung Erkundigung einzuziehen. Schon der erſte Bericht über das Mädchen D. erzählte von Schwindeleien, Nachläſſigkeit und Rohheit. Im nächſten heißt es, ſie habe den Dienſt ſchon 5 Mal gewechſelt; ſie ſei grob und ſtehle. Am längſten hatte ſie es bei einer Familie ausgehalten, die ein wanderndes Leben führte und auf den Dörfern Theater-Vorſtellungen gab. Die Waiſenverwaltung verſuchte einzuſchreiten. Aber es ergab ſich, daß das Mädchen ſchon auf der unterſten Stufe der Schamloſigkeit angelangt war. Deſto ſorgſamer ward nun in Rummelsburg die jüngere Schweſter in Acht genommen. Es fehlte nicht an Ermahnungen, Anleitungen und genaueſter Aufſicht. Das Abgangszeugniß lautet im Ganzen günſtig, indeſſen heißt es doch am Schluſſe: „ſie muß aber zuverläſſiger werden, wo ſie ſich ſelbſt überlaſſen iſt.“ Als ſie entlaſſen ward, kam ſie zu der beſten und gewiſſenhafteſten Herrſchaft, die man ausſuchen konnte. Dieſe war nach dem erſten Berichte der Erzieherin in jeder Hinſicht mit dem Mädchen zufrieden. Der zweite Bericht ſpricht ſchon von großem Leichtſinn und lobt die gewiſſenhafte Ueberwachung von Seiten der Herrſchaft. Am Schluße heißt es: „die D. ſcheint dies aber nicht mit dem Gefühle der Dankbarkeit anzuerkennen, ſondern mehr als einen läſtigen Zwang zu betrachten, den ſie leider vielleicht bald von ſich abſchütteln wird.“ Zu einem dritten Berichte iſt es nicht gekommen. Einen Monat nach dem zweiten, im vorigen November, war die Lebensgeſchichte des Waiſenmädchens zu Ende. Sie hatte eine mehrtägige Abweweſenheit ihrer Herrſchaft benutzt, um Schwindeleien zu verüben und ſich in liederliche Vergnügungen zu ſtürzen. Dann trank ſie Schwefelſäure. Bevor ſie ſtarb, gab ſie als Grund an: „ich habe mich geſchämt.“ Da lag nun im Krankenhauſe ſtarr und todt, was die Waiſen-Anſtalt der Stadt Berlin mit beſonderer Sorge an Leib und Seele hatte pflegen, bilden und hüten wollen. Von Ernſt und Milde, Ermahnung und Lob keine Frucht als Verirrung, Verzweiflung und Selbſtmord. Und doch noch eine Frucht bei dieſer Schweſter. Wer da will, kann ſie herausſchälen aus den vier Worten: „ich habe mich geſchämt.“ —

Der Waiſenknabe M. hat ſeinem Pflegevater, dem Koſſäthen S. in einem Dorfe bei Storkow, das Haus über dem Kopf angeſteckt. Mit dieſer Nachricht bringt man ihn in's Depôt zurück. Ein friſcher hübſcher Junge, jeder Zug im Geſicht Biederkeit, Offenheit und Wahrheit, nur ſieht er etwas einfach aus. Er ſpricht auch ſo, als wenn ſein Verſtand in der Entwicklung zurückgeblieben wäre. Allgemeines Mitleid, als ihn das Gericht zu 8 Tagen Gefängniß verurtheilt. Er hat unzweifelhaft im kindiſchen Triebe gehandelt, obwohl allerdings feſtgeſtellt worden, daß er ſchon einmal Brand geſtiftet. Der Prediger des Ortes ergeht ſich in längeren pſychologiſchen Erörterungen darüber. „Ich kann,“ ſagt er, „mich des Gedankens nicht erwehren, daß M. vielleicht eine That bekenne, die er doch nicht begangen hat.“ Die Verwaltung ſchreibt auch hierhin und dorthin. Sie erbietet ſich, in ihren Räumen ein Gefängniß herzurichten, damit der arme Knabe mit der Gemeinſchaft wirklicher Verbrecher verſchont bleibe. Das Gericht kann nicht darauf eingehen. Der Knabe büßt die Strafe ab und kommt dann nach Rummelsburg, damit er's nun recht gut habe. Er ſieht noch immer ſo durch und durch einfach und unſchuldsvoll aus; ein Märtyrer der Geſetze, eine Art Opfer der Juſtiz. Er wird, wie im Depôt, ſo auch in Rummelsburg recht liebevoll empfangen. Das iſt im Juli 1865. Im October berichtet die Direction: „Der Knabe M. erweiſt ſich mehr und mehr als ein gefährliches Subject. Er verübt allerlei kleine Diebſtähle und Betrügereien. Das Bedenklichſte aber iſt, daß er dabei viel Geſchick und Schlaukeit entwickelt, daß er namentlich bei Unterſuchungen wider ihn durch eine ehrliche Miene, durch den Anſchein eines ſehr biederen Weſens, durch ſchlau berechnete Winkelzüge, ja durch kunſtfertige Manipulationen zu entrinnen ſucht. Es iſt eine gewiſſe Gaunervirtuoſität in ihm, wenigſtens eine entſchiedene Anlage dazu. Ein ſolcher Knabe iſt im Stande, auch bei aller Achtſamkeit auf ihn, die Seelen anderer Kinder zu vergiften. Es wird daher beantragt, ihn in einer Beſſerungs-Anſtalt unterzubringen." Der Zufall wollte es, daß damals in ſolchen Anſtalten kein Platz zu erhalten war. Als dies endlich, nach Jahresfriſt, ermöglicht wurde, erklärte die Direction, der Knabe ſei wegen ausgezeichneter Leiſtungen in der Schule ſchon zu Oſtern prämiirt worden. „Bereits ſeit längerer Zeit hat er ſich auch ganz untadelig, ja lobenswerth geführt. Die Androhung, daß er aus der hieſigen Anſtalt entfernt werden würde, ſcheint einen tiefen und heilſamen Eindruck auf ihn gemacht zu haben. Gefahrbringend für andere Kinder iſt er in keiner Weiſe mehr."

Ob dieſe Beſſerung von Dauer ſein wird, muß die Zeit lehren. Manche Rummelsburger Kinder haben ein zwiefaches Geſicht, ein Anſtalts-Geſicht und ein anderes. In allen ſteckt eine tiefgewurzelte Hinneigung zu dem Proletarierthum ihrer früheſten Kindheit. Die Strolche, die bei Rummelsburg vorüber landſtreichen, kommen gern in die Anſtalt, um zu betteln. Sie denken, wo für ſo Viele gekocht wird, können ſie ſich auch auf Regiments-Unkoſten ſatt eſſen. Hinausgewieſen, lauern ſie hinter der Hecke im Graben, und dann kommen die Kinder heimlich und theilen mit ihnen ihr Brod und ihr Salz. Iſt das Mitleid? Gewiß; zugleich aber auch eine alte Erinnerung: ſo hat mein Vater ausgeſehen, oder mein Großvater oder mein Onkel, der uns mit in die Haide nahm und ſo gerne „Kümmel" trank.

Fragt man nach dem Syſteme, welches bei der Rummelsburger Erziehung herrſcht, ſo weiß ich keinen Namen zu nennen. Vielleicht wird, was es iſt, deutlicher, wenn ich ſage, was es nicht iſt. Einem geiſtlichen Würdenträger klagte eine

Wittwe, wie ſchwer ihr nach des Mannes Tode die Verantwortlichkeit für die Erziehung ihrer Kinder auf dem Herzen liege. Ob der Mann todt iſt oder noch lebt, iſt gleich, war die Antwort; Kinder können ja doch nur auf den Knieen erzogen werden. In Rummelsburg, glaube ich, weicht man von dieſer Theorie einigermaßen ab. Dort ſtellt man vor das Kind die aufgerichtete Autorität des Erwachſenen hin. Braucht man dabei für ſich Stärkung von oben, ſo knieet man beſſer im Kämmerlein. Wird Derartiges zu häufig vor den Augen der Kinder vorgenommen, ſo können dieſe zuletzt „erweckt" werden, wie im Waiſenhauſe zu Elberfeld, wo die ganze Erziehung nebſt Unterricht und Diſciplin ſich in lauter Erweckungen auflöſte, und die kleinen Heuchler die Erwachſenen eine ganze Zeit lang an der Naſe herumführten 7). Solche Gefühlserregungen werden natürlich am gefährlichſten, wo viele Kinder beiſammen ſind. Sie ſtecken an wie das Scharlachfieber und die Pocken. Aber wie die epidemiſchen Krankheiten in der ſcharfen, friſchen Luft von Rummelsburg niemals ihr Fortkommen fanden, ſo iſt es auch einer Art Gefühlsepidemie ergangen, die, übrigens nicht aus ähnlicher Urſache ſtammend, ſich ungefähr um dieſelbe Zeit in der Rummelsburger Anſtalt zeigen wollte. Die Mädchen der Wirthſchaftsabtheilung verfielen eines Nachts in Krämpfe und Schluchzen. Schon wollte die Erzieherin den Kopf verlieren. Da trat der Director ein, hob den Arm auf und rief mit Stentorſtimme das eine Wort: Ruhe! Von dem Augenblick an iſt in Rummelsburg nichts Erwecktes mehr bemerkt worden. — Bekanntlich liegt — daran ſei hier erinnert — eine Gefahr in der Ueberhäufung des Kindes mit religiöſem Gedächtnißſtoff, an dem, wie Jean Paul ſagt, die unſterbliche Seele ſich halb todt memorirt. Auch wird das Herz nicht weich und der Kopf nicht weiſe durch zu viel Dräuen mit Hölle, Teufel und Verdammniß. Rückert erzählt davon eine kleine Geſchichte:

Zu des Himmels Kaiſer
Trat ein Mal ein Weiſer,
Fragt, wie lang die närr'ſchen
Leute ſollen herrſchen.

Und Gott ſprach: ſo lange
Eure Weisheit bange
Wird die Menſchen machen,
Soll die Thorheit lachen.

Alſo nach der Theorie von der Erziehung „bloß auf den Knieen" geht es in Rummelsburg nicht. Aber auch nicht nach der jenes alten braven Oberſtwachtmeiſters, der da zu ſagen pflegte, Kindererziehen heißt: wo man ſie ſieht, ſchnauzt man ſie an. Die Kinder ſollen an ihren Erziehern und Erzieherinnen ein Herz merken, das ihnen das früh erkaltete Vater- und Mutter-Herz erſetzt. Und oft finden ſie in der Anſtalt mehr als einen ſolchen Erſatz. Früher gab man Kinder hinaus, die noch Eltern hatten, und dann zu dieſen zurückkamen. Solche Kinder liefen häufig zur Anſtalt zurück und baten mit Thränen, ſie wieder aufzunehmen. Ein Mädchen P. beiſpielsweiſe ließ ſich nicht abweiſen. Sie nächtigte heimlich im Graſe neben dem Hauſe, in dem ſie ein halbes Jahr lang Zuflucht vor Mutter und Vater gefunden hatte.

Dabei iſt Koſt und Lebensart nicht anders, als das Leben, welches der Kinder wartet, mit ſich bringt. Die Schlafſäle gehen durch die Häuſer hindurch, ohne eine Zwiſchenwand dem durchſickernden Nordoſtwind entgegenzuſtellen, der nicht ſanft vom Felde herüberweht. Im Souterrain vollzieht ſich Morgens das Waſchen und die Toilette. Die Nahrung iſt zur Ernährung ausreichend aber einfach 8).

Der Unterricht erhebt ſich in den erſten Klaſſen bis zu Mathematik und Phyſik. Warum das für die Waiſenknaben, die doch bloß Handwerker werden ſollen? Aber wie kann der vernehmen: Ich heiße, wie angegeben, bin 8 Jahre alt, evangeliſcher Confeſſion, geboren wann, weiß ich nicht, wo, weiß ich nicht, ortsangehörig wo, weiß ich nicht. Ich bin unverheirathet, habe keine Kinder. Mein Vater Vornamens weiß ich nicht, lebt in Veltendorf bei Pr. Meine Mutter Vornamens Luiſe, geborne weiß ich nicht, lebt auch in Veltendorf. Ich bin ſeit dem 17. d. M. aus meiner Heimath entfernt, halte mich ſeit geſtern in Berlin auf und habe keine Wohnung. Ich bin legitimirt durch nichts. Meine Effecten führe ich bei mir und beſitze an Subſiſtenz- und Reiſemitteln nichts. In Militairverhältniſſen habe ich niemals geſtanden. Ich bin noch nicht beſtraft. — So weit das Formular. Dann fährt die Ausſage des achtjährigen Jungen wörtlich folgendermaßen fort: ich bin nach Berlin gekommen, um mir hier ein Mädchen zu ſuchen, mit der ich leben und arbeiten kann, ich habe zu Hauſe immer ſo gehört, daß das ſchon Mehrere ſo gemacht haben. Ich war bei meinem Onkel, dem Tiſchler S. in T. in Pflege und, als eines Tages eine Gans fortgelaufen war, bin ich aus Angſt fortgelaufen. Nun werde ich heut wieder nach Hauſe gehen, geſund bin ich. — Regiſtrirt wird, daß der Knabe zum Thore hinaus befördert worden. Nach zwei Tagen wird er auf dem Alexanderplatz wieder obdachlos angetroffen und nun in's Waiſenhaus gebracht. Hier ſchreibt man an die Orte, die der Knabe angegeben, aber nirgends iſt er bekannt. Inzwiſchen läuft ein anderes Protokoll in der Mark Brandenburg umher. Ein Tagelöhner Sieber iſt von Pr. mit ſeiner Familie in die Gegend von Bernau gekommen, um beim Kartoffelgraben zu verdienen. Eines Tages läuft ſein achtjähriger Sohn Carl mit einer Abtheilung Artillerie davon. Der Vater nimmt zwar weiter keine Notiz von dem ihm wiederfahrenen Verluſte, aber das Mutterherz fängt nach einigen Tagen an, ſich zu rühren. Die Mutter geht zur nächſten Ortspolizeibehörde und läßt den Vorfall verzeichnen.

Beide Protokolle ſuchen ſich, wie Magnet und Eiſen. Hier ein Junge zu viel, dort einer zu wenig, und das Signalement ſtimmt bis auf's Haar, das ſo characteriſtiſch weißlichblond dem ukermärkiſchen Bauerjungen in die Stirn hängt. Endlich klappen ſie zuſammen; Wilhelm Brandt iſt als Carl Sieber erkannt, und zieht per Transport in ſeine Vaterſtadt wieder ein.

Laufen Kinder ihren Eltern fort, ſo kommt das Umgekehrte noch weit häufiger vor. „Vater und Mutter haben ſich heimlich aus der Wohnung entfernt“, iſt ein ſehr gewöhnlicher Grund, aus dem die Kinder dem Waiſenhauſe überſandt werden. Reiſende Künſtler vergeſſen ihre Nachkommenſchaft mit Vorliebe hier in Berlin, und dieſe Kinder ſind die ſchlimmſten, da ſie ihre Eltern begleitet und oft in der „Kunſt“ unterſtützt haben'[2]).

Der Schauſpieler von C. beiſpielsweiſe vergaß hier nach einem nicht zufriedenſtellenden Debut ſeine elfjährige Tochter Marie. Dieſe fand man in einem Neubau der Waſſerthorſtraße vor, wo ſie ſich mit einem gleichalterigen Knaben eine kleine Hauswirthſchaft eingerichtet hatte. Sie ward in auswärtige Koſtpflege gegeben, und ſcheint bis jetzt dort gut zu gedeihen.

Dieſe auswärtige Koſtpflege erſtreckt ſich auf kleine Städte und Dörfer in der Mark. Die Ortsgeiſtlichen führen dort die Aufſicht über die Berliner Waiſenkinder gegen ein Honorar von 2 Thlr. pro Kind und Jahr. Die meiſten Kinder aſſimiliren ſich dort bald und kehren auch ſpäter nicht nach Berlin zurück. Die eigene Mutter hätte den Jungen Wirk nicht wiedererkannt, als er von der Mecklenburgiſchen Gränze in's Depôt zurückgenommen war, wie er daſtand mit ſonnverbranntem Geſicht, der ſtereotypen blauen Bauerjacke, und wie er im ächteſten Plattdeutſch ſeinen Wunſch ausdrückte, wieder zum Bauern zurückzukehren.

Einige Knaben legen freilich auch draußen den Berliner Straßenjungen nicht ab. Der Knabe H. entlief immer wieder, getheilt. Als nun am nächſten Vormittag wie gewöhnlich ein reichliches Stück Fleiſch in der Küche praſſelte, wartete der Knabe Wimmer nicht ab, bis es gar war, ſondern lief ſpornſtreichs nach Berlin zurück.

Die Aufſicht über die Kinder der auswärtigen Koſtpflege führen außer dem Geiſtlichen beſoldeterweiſe auch noch unbeſoldet die Nachbarn. Nicht als ob ſich in jedem Dorfe ein Pammachius fände, zu dem der heilige Hieronymus ſagte: ſo viel arme Kinder in Rom ſind, ſo viele Kinder haſt du daſelbſt; — nein, ſondern weil ſich in allen Dörfern Leute finden, die ſelber gern Waiſenkinder gegen Entgelt in Pflege nähmen und ihre Nachbarn um dieſen vermeintlichen Vortheil beneiden. Und auch im Uebrigen ſind an kleinen Orten wirkliche Mißbräuche unmöglich lange verborgen zu halten.

Schwieriger iſt die Handhabung der Aufſicht über diejenigen Waiſenkinder, welche in Berlin ſelbſt untergebracht ſind. Das Koſtgeld beträgt für Säuglinge, welche auch eine vollſtändige Säuglings-Ausſtattung erhalten, 5 Thlr., für Kinder im 2. Lebensjahre 4 Thlr., ſodann bis zum 6. Jahre 3½ Thlr.; von da ab (wo die Schulpflichtigkeit beginnt) werden 3 Thlr.[13]) nebſt freier Bekleidung und freiem Schulunterrichte gewährt. Nach dieſen Preiſen iſt klar, daß im Allgemeinen nur ſ. g. kleine Leute ſich zur Uebernahme von Waiſenkoſtkindern melden, häufig ſolche, die keine eigenen Kinder haben und dieſen Mangel zu erſetzen ſuchen. Aber auch für andere iſt es lockend, gegen die allmonatliche Forderung des geſtrengen Hauswirthes einigermaßen durch die pünktlich eingehende baare Zahlung des Koſtgeldes geſichert zu ſein, ſowie von den kleinen häuslichen Dienſtleiſtungen Gebrauch zu machen, zu welchen Kinder in derartigen Familien benutzt zu werden pflegen. Häufiger, als man es von vornherein annehmen möchte, bildet ſich ſo, trotz des gering erſcheinenden Aequivalentes, ein Verhältniß heraus, welches durchaus befriedigen kann. Es iſt durch die angeſtellten Reviſionen nachgewieſen, daß weitaus die meiſten Kinder zufriedenſtellend verpflegt und erzogen werden. Aber es verſteht ſich von ſelbſt, daß ſtets Fälle mit unterlaufen, wo Pflegeeltern ein Kind übernehmen wollen, lediglich um es in eigennütziger Weiſe auszubeuten. Hiergegen ſucht ſich die Verwaltung zunächſt durch eine Präventiv-Maßregel zu ſchützen. Keine Familie erhält ein Kind, bevor ſie einen ſ. g. Fragebogen von den Aufſichtsorganen hat ausfüllen laſſen. Dies geſchieht auf Grund von Unterſuchungen an Ort und Stelle. Die einzelnen Qualitäten, auf die es ankommt, ſind in beſonders aufgeſtellten Fragen formulirt, deren Beantwortung ſchriftlich abgegeben wird. Schließlich äußert ſich ein polizeiliches Atteſt über die Unbeſcholtenheit der nachſuchenden Familie. Lauten dieſe Zeugniſſe durchweg günſtig, ſo wird der Familie ein Kind anvertraut und der Fall ſofort dem Waiſenamte des Bezirkes mitgetheilt. Solche Waiſenämter ſind für ganz Berlin organiſirt. Sie beſtehen in der Regel aus 5 Perſonen, welche nicht mehr, als zuſammen 15 Kinder unter Aufſicht haben ſollen. Der Vorſteher des Amtes vertheilt die Geſchäfte unter die Mitglieder, Pfleger und Pflegerinnen, dergeſtalt daß die Pfleger die ſchulpflichtigen Knaben, die Pflegerinnen die übrigen Kinder zu überwachen haben. Halbjährlich reichen die Waiſenämter der Verwaltungs-Behörde über jedes Kind einen Bericht ein; halbjährlich finden auch Verſammlungen der Vorſteher Statt, um über die gemachten Erfahrungen die Meinungen auszutauſchen, der Behörde Vorſchläge und Anträge mitzutheilen und dergl. Sobald eine Pflege ſich als ungeeignet herausſtellt, macht das Waiſenamt Anzeige Behufs anderweiter Unterbringung des Kindes. —

Was nun empfiehlt ſich mehr für die Waiſenkinder, die Anſtalts-Erziehung oder die Koſtpflege? Ueber dieſe Frage iſt, wie ſchon oben angedeutet worden, in umfangreichen Schriften verhandelt und geſtritten. An dieſer Stelle, wo alle Zweige des weiten Themas der Waiſenpflege nur fragmentariſch und ſkizzenhaft berührt werden konnten, ſchließt ſich der Verſuch einer gründlichen Beantwortung von ſelber aus. Es iſt ſchon erwähnt, daß in Rummelsburg, abgeſehen von der beſonderen Einrichtung der Wirthſchaftsabtheilung, fünf Knabenhäuſer der Zahl von nur zweien Mädchenhäuſern gegenüber ſtehen. Vielleicht iſt hieraus der Erfahrungsſatz erkennbar, daß für Mädchen eine gute Familienpflege der Anſtaltspflege vorzuziehen iſt. Die Gründe liegen in dem natürlichen Unterſchiede des Weſens beider Geſchlechter. Für den Knaben, der für das Außenleben, das Wirken in größeren Kreiſen beſtimmt iſt, paßt wohl das Leben, Ringen und Wetteifern in zahlreicher Geſellſchaft, die Gewöhnung an feſte Ordnung u. ſ. w. Meiſt erwartet ihn überdies, wenn er aus der Anſtalt entlaſſen iſt, die Lehre bei einem Meiſter, in deſſen Familie er noch mehrere Jahre (meiſt 4 oder 5) einen feſten Anhalt und beſtändige Aufſicht findet. Das Mädchen iſt auf die Welt des engeren häuslichen Kreiſes angewieſen; es wird zwar auch in der Anſtalt an häusliche Geſchäfte und Verrichtungen gewöhnt; die Erzieherinnen ſuchen, wie ſchon angeführt, auch nach der Entlaſſung die Verbindung zu unterhalten, — immerhin aber wird ſich in dieſem Verhältniß ſchwerer die vertrauliche Hingebung entwickeln, mit der des Mädchens Weſen ſich einer mütterlichen Pflegerin anſchließen will. Deſſen ungeachtet kann die Rummelsburger Anſtalt im Allgemeinen auch mit den Reſultaten zufrieden ſein, die ſie bei den Mädchen erzielt hat. Auch das Publikum hat in dieſem Sinne geurtheilt: mit Vorliebe wird von Familien, die weibliche Dienſtboten verlangen, ein Mädchen aus Rummelsburg geſucht. Ferner giebt es auch unter den Mädchen häufig Naturen, welche die ſtraffere Disciplin der Anſtalts-Erziehung erfordern, und für ſolche Fälle würde jedenfalls das gänzliche Aufgeben der Anſtalts-Mädchenhäuſer ein fühlbarer Mangel werden. Endlich iſt nicht gering anzuſchlagen, was gerade die Rummelsburger Anſtalt vor anderen Waiſenhäuſern auszeichnet und was den Mädchen in gleicher Weiſe wie den Knaben zu Gute kommt: die Kinder des Berliner Proletariates ſehen ſich aus der dumpfen Enge ihres früheren Aufenthaltes, wo ſo leicht alles beſſere Gefühl abſtumpft, in die freie Natur verpflanzt, deren mächtige, geſunde Anregung Geiſt und Leib wieder zu regerem Leben weckt. Dieſer regenerirende Einfluß iſt oft und beſtimmt wahrgenommen worden. Wie weit daraus ein Motiv zu entnehmen, dieſes oder jenes beſtimmte Mädchen nach Rummelsburg zu geben, auch wenn eine wahrſcheinlich gute Familienerziehung zur Verfügung ſteht, iſt im einzelnen Falle zu erwägen.

Vielleicht müſſen bei dieſer ganzen Frage: ob Koſtpflege, ob Anſtaltserziehung, die Verwaltungen mehr als ſonſt ſich in dem Worte des türkiſchen Richters beſcheiden: „Gott weiß es beſſer.“

Anmerkungen.

1) Das Berliner Stadt-Wappen.

2) Ein bei den unteren Klaſſen beliebtes Berliner Gebäck.

3) Kleine Vertiefungen zwiſchen den Pflaſterſteinen oder im Sande, in welche Kugeln aus Thon u. dgl. (Murmel) gerollt werden.

4) Ein Dreipfennigſtück, Kupfermünze.

5) Eine im Volke gebräuchliche Benennung des Armen-Commiſſions-Vorſtehers.

6) Urſprünglich der Eigenname eines, die Berliner Straßen durchwandernden, halbblödſinnigen Lumpenſammlers; jetzt gebräuchlicher Name für alle ähnlichen Geſtalten.

7) Die Behörden erhielten erſt Kunde davon, als das in Elberfeld erſcheinende Erbauungsblättlein „der Säemann“ unterm 13. Febr. 1861 einen wohlgemeinten Bericht darüber brachte. „Es waren,“ heißt es darin, „im Laufe der letzten Wochen die Zöglinge des Waiſenhauſes, Knaben und Mäd-

chen, von einer heftigen Sündenangſt, einer göttlichen Traurigkeit erfaßt worden. Sie hatten gewaltigen Hunger nach Seelenſpeiſe; ſie legten Schriftabſchnitte aus; ſie verfielen in Krämpfe und brachen zuſammen, daß ſie zu Dutzenden da lagen; einige verloren die Sprache, andere wiederum waren mitunter förmlich am Brüllen . . . Ueber die Zeit war man nicht Herr" u. ſ. w.

8) Zum erſten Frühſtück dient Roggenmehlſuppe, zum zweiten erhält das Kind 5 Loth Brod und 1/10 Loth Salz. Zu Mittag giebt es 4 Mal wöchentlich Fleiſch, 3½ Loth pro Kind; als Gemüſe Reis, Hirſe, Graupen in Fleiſchbrühe mit Kartoffeln, oder Erbſen, Linſen, Bohnen in Fett, Brühkartoffeln, ſaure Kartoffeln, Kohl mit Kartoffeln u. dgl.; zum Veſper 5 Loth Brod und 1/10 Loth Salz; zum Abendbrod ½ Quart Hafer- oder Buchweizen-Grütze, Gries-, Brod-, Semmel-, Bier- oder Kartoffel-Suppe, oder auch Kartoffeln mit Hering oder Butterbrod von 10 Loth Brod und 1 Loth Butter.

9) Vagabunden-Ausdruck für freie Natur.

10) Provinziell für „ausgegraben".

11) Flaſche.

12) So ſchreibt ein „Künſtler" aus Deſſau an ſeine Frau: Liebe Frau, es grüßt und küßt Dich Dein guter Mann. Ich hätte auch ſchon das letzte Jahr an Dich geſchrieben, aber ich dachte, was ſollte ich eher ſchreiben, wenn ich Dich nicht ein Paar Thaler ſchicken konnte. Unſer Albert hatte am Sonntag 20 Sgr. 6 Pfg. Trinkgeld von den Herrſchaften bekommen, denn er arbeitet ſchon recht brav, er iſt jetzt ſchon ſo weit, daß er von Tiſch und Stuhl macht, er macht die Kreuzbiegung und ſo macht er auch den Kopfſprung von Tiſch und Stuhl, ſo daß er ein ungeheures Bravo von den Herrſchaften erhielt und wurde einige Male rausgerufen, jetzt macht er auch ſchon recht viele Witze, die ich ihm wieder gelernt habe. Meine Adreſſe iſt: an den Künſtler Herrn Julius S. zu Deſſau im Wilden Mann.

Nachher befand ſich dieſer Albert, nachdem Vater und Mutter durch Berlin gekommen waren und ihn zurückgelaſſen hatten, bei einem Onkel Cohn, der ſchon 24 Jahr im Zuchthaus geſeſſen hatte. Die nächſte neue Gelegenheit, die ihn wieder in's Zuchthaus brachte, führte den Knaben dem Waiſenhaus zu.

13) Außerhalb Berlin's 2 Thlr., nur die in der Nähe Berlin's gelegenen Städte Charlottenburg und Köpenick gelten wegen der höheren Preiſe der Lebensmittel der Hauptſtadt gleich.

◆

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Die **erſte Serie** dieſer Vorträge, enthaltend 24 Hefte im Umfange von 2 is 3 Druckbogen gr. 8°, iſt nunmehr zum Abſchluß gebracht und beſteht aus olgenden Vorträgen:

1. Rud. Virchow: Ueber Hünengräber und Pfahlbauten. 2. J. C. Bluntſchli: Die Bedeutung u. die Fortſchritte des modernen Völkerrechts. 3. H. W. Dove: Der Kreislauf des Waſſers auf der Oberfläche der Erde. 4. W. A. Lette: Die Wohnungsfrage. 5. W. Foerſter: Zeitmaaße und ihre Verwaltung durch die Aſtronomie. 6. Ed. Oſenbrüggen: Land und Leute der Urſchweiz. 7. G. H. Meyer (in Zürich): Ueber Sinnestäuſchungen. 8. Schulze-Delitzſch: Sociale Rechte und Pflichten. 9. J. Roſenthal: Von den elektriſchen Erſcheinungen. 10. J C. Kühns: Die Bedeutung des Wechſels für den Geſchäftsverkehr. 11. S. Roſenſtein: Myſticismus und Aberglauben in der Medizin. 12. E. Zſchokke: Heinrich Zſchokke. Ein biographiſcher Umriß. 13. A. Müller: Ueber die erſte Entſtehung organiſcher Weſen &c. 14. J. B. Meyer: Volksbildung und Wiſſenſchaft in Deutſchland. 15. Ad. Baeyer: Ueber den Kreislauf des Kohlenſtoffs in der organ. Natur. 16. Herm. Grimm: Albrecht Dürer. 17. Fr. von Holtzendorff: Richard Cobden. 18. K. J. Mittermaier: Das Volksgericht in Geſtalt der Schwur- und Schöffengerichte. 19. J Roth: Ueber die Steinkohlen. 20 u. 21. E. Engel: Der Preis der Arbeit. 22. W. Siemens: Die electriſche Telegraphie. 23. C. F. Rammelsberg: Ueber die Mittel, Licht und Wärme zu erzeugen. 24. Ed. Zeller: Religion und Philoſophie bei den Römern.

Jede Lieferung enthält einen in ſich abgeſchloſſenen Vortrag, welcher ſich ſeiner Form und Anlage nach ſowohl zur Vorleſung vor Anderen als zur eigenen Lektüre eignet. Bei der Natur der darin behandelten Gegenſtände, welche zum Theil die ſchwierigſten Aufgaben der Wiſſenſchaft betreffen, wird begreiflicherweiſe ein ſofortiges Verſtändniß aller Einzelheiten nicht erwartet werden können. Wiederholtes Leſen und aufmerkſame Prüfung des Geleſenen wird häufig genügen, um den Zuſammenhang klar aufzufaſſen. In Vereinen wird durch den Fragekaſten und durch nachträgliche Erläuterung des Vortragenden das Fehlende ergänzt werden. In jedem Falle wird das Nachdenken erregt und der Anſtoß zur Vervollſtändigung der eigenen Bildung gegeben werden.

Indem hiermit die **zweite Serie** dieſer mit allgemeinem Beifall von allen Schichten des Publikums aufgenommenen Sammlung angekündigt wird, kann ſchon jetzt mit Zuverſicht erklärt werden, daß die in der Zeit beſonders hervortretenden wiſſenſchaftlichen Intereſſen die gebührende Berückſichtigung finden werden. Biographien berühmter Männer, Schilderung großer hiſtoriſcher Ereigniſſe, volkswirthſchaftliche Abhandlungen, culturgeſchichtliche Gemälde, phyſikaliſche, aſtronomiſche, chemiſche, botaniſche, zoologiſche, phyſiologiſche, arzneiwiſſenſchaftliche, erforderlichenfalls durch Abbildungen erläuterte Vorträge u. a. m. ſollen auch künftig den Gegenſtand der Vorträge bilden. Rein politiſche und kirchliche Parteifragen der Gegenwart bleiben ausgeſchloſſen.

Vorbehaltlich etwaiger Abänderungen im Einzelnen kündigen wir vorläufig für die **zweite Serie** von 24 Heften (die **Hefte 25—48 umfaſſend**) d nachfolgenden Vorträge an.

Bereits ausgegeben ſind:

25. Heft. Rud. Gneiſt: **Die Stadtverwaltung der City von London.** **Preis einzeln 10 S**
26. Heft. Trauttwein von Belle: **Wilhelm von Oranien, der Befreier der Nie lande.** **Preis einzeln 7½ S**
27. Heft. A. von Graefe: **Sehen und Sehorgan.** **Preis einzeln 10 S**
28. Heft. E. Perels: **Ueber die Bedeutung des Maſchinenweſens für die Landwir ſchaft.** **Preis einzeln 7½ S**
29. Heft. R. Zelle: **Waiſenpflege und Waiſenkinder in Berlin.** **Preis einzeln 7½ S**

In Kurzem wird erſcheinen:

30. Heft. J. Oppenheimer: **Ueber den Einfluß des Klima's auf den Menſchen.**

Demnächſt folgen:

Dr. Woltmann: Die deutſche Kunſt und die Reformation. — Dr. **Schuhmacher: D** Rettungsweſen zur See. — Prof. Dr. John: Die Todesſtrafe. — **Prof. Dr. Wattenba** Algier. — Prof. Dr. Endemann: Die geſchichtliche Entwickelung der **Handelsgeſellſchaf** — Dr. Niſſen: Pompeji. — Prof. Dr. v. Holtzendorff: **Die Verbeſſerungen in der g** ſellſchaftlichen und wirthſchaftlichen Stellung der Frauen. — **Prof. Dr. Alex. Braun: Ue** die Eiszeit der Erde. — Prof. Dr. Otto Weber: **Ueber ſchmerzſtillende Mittel im Allgem** nen und Chloroform insbeſondere. — Prof. Dr. Jul. Kühn: **Ueber die Urſachen der Pfl** zenepidemien. — Prof. Dr. v. Seebach: Ueber Vulcane. — Prof. Dr. Virchow: **Ue** Nahrungs- und Genußmittel. — Prof. Dr. Hoppe Seyler (Tübingen): **Ueber das Son** ſpektrum und die Spektral-Analyſe.

Außerdem haben die Herren Prof. Häckel und Prof. Dr. **Kuno Fiſch** in Jena, Dr. Gerſtäcker, Stadt-Ger.-Rath Tweſten, Dir. Dr. **Gallenkamp** i Berlin, Prof. Rütimeyer in Baſel, Prof. Bolley in Zürich, Prof. **Eiſenlo** in Carlsruhe, Prof. de Bary in Freiburg u. A. ihre Mitwirkung **angezeigt.**

Die Seiten der Hefte werden künftig eine doppelte Paginirung **habe** oben die Seitenzahl des einzelnen Heftes, unten — **und zwar eingeklammert** - die fortlaufende Seitenzahl der Serie (des Jahrganges).

Im Abonnement auf 24 Hefte koſtet **jedes Heft nur 5 Sgr.;** d Einzelpreis eines Heftes wird circa 8—10 Sgr. ſein.

Der **Subſcriptionspreis** für die neue II. Serie 1867 (**Heft 25—4** iſt demnach, gleichwie für die I. Serie 1866 (Heft 1—24), **4 Thlr.**

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GROWTH OF THE ORAL METHOD OF INSTRUCTING THE DEAF.

AN ADDRESS

Delivered November 10, 1894, on the Twenty-fifth
Anniversary of the *Opening* of the Horace
Mann School, Boston, Mass.

BY

ALEXANDER GRAHAM BELL.

*Reprinted, by permission, from the Annual Report of the Committee
on the Horace Mann School, School Document No. 12, 1895.*

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METHODS

OF

INSTRUCTING THE DEAF

IN THE

UNITED STATES.

STATISTICS COMPILED FROM THE

AMERICAN ANNALS OF THE DEAF

BY

ALEXANDER GRAHAM BELL,

MARCH, 1896.

I.—TABLE SHOWING NUMBER OF PUPILS TAUGHT BY EACH METHOD.

YEAR.	Total Number of Pupils.	Number receiving Instruction in Articulation.	METHODS OF INSTRUCTION.						
			Number taught wholly by Manual Methods.			Number taught wholly by Oral Methods.			Number Taught by a Combined System.‡
			Total.	French Manual or Sign Method.	Manual Alphabet Method.	Total.	German Oral or Speech-reading Method.	Auricular Method.	
1884	7482	2041	5441	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.
1885	7801	2618	5183						
1886	8050	2484	5566						
1887	7978	2556	5422						
1888	8372	3251	5121						
1889	8575	3412	5163						
1890	8901	3682	5219						
1891	9232	4245	4987			963†	963†		3282
1892*	7940	3924	4016			1581	1581		2343
1893*	8304	4485	3819			2136	2056	80	2349
1894*	8825	4802	4023			2369	2260	109	2433
1895*	9252	5084	4168			2719	2570	149	2365

* Figures refer to number of pupils present November 15th.

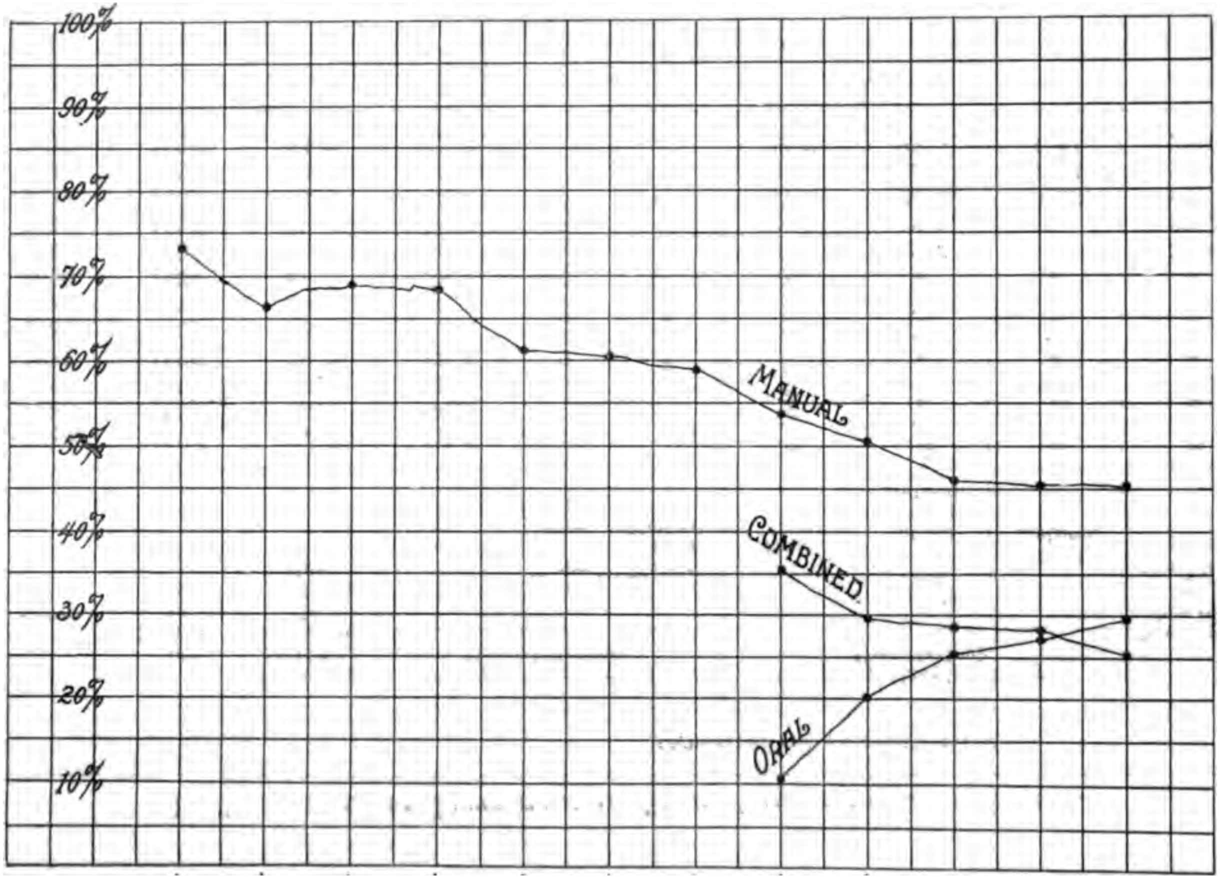
† Ascertained by Prof. Joseph C. Gordon. See introduction to "Education of Deaf Children," published by the Volta Bureau, Washington, D. C.

‡Including those taught partly by Manual and partly by Oral Methods; and those taught wholly by Manual Methods who receive instruction in articulation.

II.—Table Showing Percentage of Pupils Taught by Each Method.

Year.	Total Number of Pupils.	Percentage receiving Instruction in Articulation.	Methods of Instruction.						
			Percentage taught wholly by Manual Methods.			Percentage taught wholly by Oral Methods.			Percentage Taught by a Combined System.
			Total.	French Manual or Sign Method.	Manual Alphabet Method.	Total.	German Oral or Speech-reading Method.	Auricular Method.	
1884	100%	27.2	72.8	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.	Statistics wanting.
1885	100%	33.5	66.5						
1886	100%	30.8	69.2						
1887	100%	32.0	68.0						
1888	100%	38.8	61.2						
1889	100%	39.7	60.3						
1890	100%	41.3	58.7						
1891	100%	46.0	54.0			10.4	10.4		35.6
1892	100%	49.4	50.6			19.9	19.9		29.5
1893	100%	54.0	46.0			25.7	24.7	0.96	28.3
1894	100%	54.4	45.6			26.8	25.6	1.24	27.6
1895	100%	54.9	45.1			29.3	27.7	1.61	25.6

III.—Graphical Chart, showing the percentage of deaf pupils in the United States taught by Manual, Oral and Combined Methods.



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BOSTON:
PRESS OF ROCKWELL AND CHURCHILL.
1896.

GROWTH OF THE ORAL METHOD OF INSTRUCTING THE DEAF.

ADDRESS OF ALEXANDER GRAHAM BELL.

Mr. Chairman, Ladies and Gentlemen : It is indeed a great privilege to be able to join with you in congratulating the Horace Mann School for the Deaf on the twenty-fifth anniversary of its birth. I have a very deep personal interest in this school, for it was the means of bringing me to America. The School Board of Boston, at the solicitation of Miss Fuller, your worthy principal, invited me to visit the United States for the purpose of helping her teachers in their efforts to teach the deaf children of Boston to speak, and to understand speech by watching the movements of the mouth; and in April, 1871, I entered upon the work.

I note with sadness how few of the early teachers remain. Miss Fuller is here, Miss True is here; the others have passed away. As I recall those early days when I first knew this school, and when it occupied a very different building from the palatial structure in which we are to-day, I remember the face of an old man passing from class to class, a man who loved the school, — its founder, its friend, — and who almost lived in the school during the school hours of the pupils. I refer to the Hon. Dexter S. King. I look upon your walls, but I see no memorial of his name. I trust that the School Board of Boston may yet record in an enduring tablet, or in some other enduring manner, the name of that good man, who was the earliest and best friend that the school has ever had.

This was a very little school at the time that I remember it, a very young school, — only two years old, — an experimental school. People really did not know whether it was practicable to teach the dumb to speak and the deaf to hear. The public looked upon this as a sort of miracle; and we all knew that the days of miracles had gone. But many of the miracles of the past are to-day every-day facts; and every mother of a deaf child now knows, to her joy, that her child can be taught to speak, if not as well as other children, yet so as to be intelligible to her and her friends at home, and that her child can be taught to understand the speech of others by means of his eyes. This is a glorious accomplishment. No one doubts it to-day, for there are too many hundreds, too many thousands, of instances. It is an accomplished fact, it is no longer an experiment.

I can remember with somewhat of amusement the feelings which actuated myself when I first came into contact with this school. As a student of the mechanism of speech, familiar with it from my childhood, this subject, in fact, having been the professional study of my family for three generations, I realized that deaf children whose vocal organs were perfect could be taught to speak. I understood, of course, that no one naturally speaks a language that he has never heard, and that as a matter of course a child who has never heard the English language could only acquire it by instruction. I was therefore prepared for the claims of my friend, Miss Fuller, that the deaf children of the city of Boston could be taught to speak. But I must confess that I was extremely sceptical in regard to the possibility of their understanding speech by watching the movements of the mouth. It is more difficult for one who is familiar with the mechanism of speech to realize the possibility of this than for one who is ignorant of it; and, to be candid, I did not believe it. Of course I was too polite to say so to my friend, Miss Fuller; but still there was that lurking feeling in my mind, that the claim that deaf children could understand the speech of their friends to any great or useful extent was too broad. Observation, however, assured me that the children really did seem to understand, to a very useful extent, the utterances of their friends and their teachers; they were not deaf at home; they were not deaf with their teachers; and my curiosity was so much aroused to ascertain the cause of what seemed from my point of view impossible as to lead me to make the instruction of the deaf my life work.

My original scepticism concerning the possibility of speech-reading had one good result: it led me to devise apparatus that might help the children. Why should we not make a machine to hear for them, a machine that should render visible to the eyes of the deaf the vibrations of the air that affect our ears as sound? I made many such machines. I varied my form of apparatus all the way from the phonautograph of Leon Scott up to an apparatus constructed of a human ear taken from a dead subject. A pencil actuated by the membrana tympani recorded upon a sheet of smoked glass the utterances that were spoken into the dead man's ear. These experiments were what the world calls failures; that is, they did not accomplish the result intended. I did not succeed in making an apparatus into which a deaf child could look and see the vibrations of speech so recorded as to enable him to understand what was said, or to recognize the elements of speech. It was a failure; but that apparatus, in process of time, became the telephone of to-day. It did not enable the deaf to see speech as others hear it, but it gave ears to the telegraph, and to-day we hear in Boston what is spoken in New York or Chicago. I trust you will pardon personal allusions to my own work; it is only right that it should be known that the telephone is one of the products of the work of the Horace Mann School for the Deaf, and resulted from my attempts to benefit the children of this school. I am proud indeed to think that twenty-three years ago I was myself a teacher in this school; I am proud to think that I have been a teacher of the deaf ever since.

In celebrating this anniversary it may be well to take a glance around us at the other schools of the country and see where the Horace Mann School stands.

Quite a number of different methods of instruction are in use in America; and day-schools and boarding-schools — large and small — are scattered throughout the length and breadth of the land. The oral method, which Boston has adopted, is used with less than 25 per cent. of our pupils; and day-schools constitute only a small minority of the schools of the country (between 16 and 23 per cent.).[1]

Is Boston then justified in the adoption of the oral method and the day-school plan? Or are other methods more successful, and boarding-schools preferable to day-schools?

The best way to approach this subject, I think, is to examine the matter historically and statistically.

Where you have a free competition of methods and schools, and a struggle among them for existence, natural selection will surely operate to bring about the survival of the fittest. Time will reveal the best.

The first oral schools were established in 1867, so that we have as yet only twenty-seven years of progress of the oral method to examine. The French or sign system with which it came into competition was introduced in 1817, and for fifty years had the whole field of America to itself without opposition. The oral schools thus started under the disadvantage of having to dispute progress with a method that was already well intrenched upon American soil, and which considered the advent of the oral method as a hostile act.

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[1] The latest statistics (1893) show that out of 8,304 pupils in American schools for the deaf, 2,056, or 24.7 per cent., were taught wholly by the oral method. Total schools, 79 (boarding 61, day 13, unknown 5). See "Annals" for January, 1894, XXXIX., pp. 52 to 62.

[2] The length of this paper renders it advisable to omit the greater portion of my historical remarks concerning the early schools of the country. I do this the more readily because all the material is accessible in printed form in the great work published by the Volta Bureau (Washington, D.C., 1893), entitled "Histories of American Schools for the Deaf," issued under the able editorship of Dr. Edward Allen Fay, Vice-President of the Columbia Institution for the Deaf and Dumb, and editor of the "American Annals of the Deaf." A. G. B.

What has been the progress of this method since? Statistics compiled from the "American Annals of the Deaf" yield the following results:

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[1] See call for "The First Conference of Superintendents and Principals of American Schools for the Deaf," "Annals," 1868, Vol. XIII., p. 133. "The increased interest manifested by the public during the past year in the education of the deaf and dumb, taking in certain localities the form of hostility to the system of instruction successfully practised in this country for a half-century, has led the officers of this institution" (The Columbia Institution) "to consider the present an opportune time for the assembling in conference of those best fitted by practical experience and long study to judge what measures and methods will most conduce to the welfare of the deaf and dumb of our country. . . . We have therefore determined to invite the principals of the regular institutions of the United States to meet here on Tuesday, the 12th of May next," etc. The oral schools existing in Northampton, Mass., and New York City were not invited, and were not represented at the meeting that followed; but the conference passed a resolution to the effect that at subsequent conventions teachers and others should be invited, "without regard to the method or system they may use in their labors." ("Annals," 1868, XIII., p. 253.)

I. STATISTICS OF THE NEW ENGLAND STATES.

Date.	Number of Pupils.			Percentage of Pupils.	
	Total Pupils.	Taught Articulation.	Taught wholly by the Oral Method.	Taught Articulation.	Taught wholly by the Oral Method.
1868	304	Statistics wanting.	38		12.4
1869	320		41		12.8
1870	370		76		20.5
1871	387		95		24.6
1872	409		119		29.1
1873	418		138		33.0
1874	411		147		35.8
1875	437		168		38.4
1876	442		162		36.7
1877	471		199		42.3
1878	466		204		43.8
1879	483		228		47.2
1880	476		243		51.1
1881	479		246		51.4
1882	484		260		53.7
1883	498		269		54.0
1884	520	343	289	66.0	55.6
1885	512	348	287	68.0	56.1
1886	500	366	293	73.2	58.6
1887	508	405	304	79.7	59.8
1888	501	418	322	83.4	64.3
1889	531	450	339	84.7	63.8
1890	529	460	343	86.9	64.8
1891	564	506	365	89.7	64.7
1892*	504	447	334	88.7	66.3
1893*	524	461	351	87.6	67.0

* Figures refer to number of pupils present November 15.

In 1868, the year preceding the opening of the Horace Mann School, the total number of deaf pupils in the New England States was 304. Of these, 38, or a little more than 12 per cent., were found in oral schools. Since then the percentage has continuously increased until, on Nov. 15, 1893, out of a total of 524 pupils, 351, or 67 per cent., were found in exclusively oral schools.

Thus, so far as the New England States are concerned, the verdict of time has been exceedingly favorable to the oral method.

Starting from two independent centres in the East (Northampton, Mass., 1867; New York city, 1867), the oral movement gradually spread to other parts of the United States; but it is difficult to trace its progress in the country as a whole, because the "Annals" has failed to give us special statistics upon the subject until quite recently.

It so happens that in the sign or so-called "combined" schools of the New England States no pupils are taught wholly by the oral method, so that the growth of the method in these States can be ascertained by simply adding together the pupils in attendance at the oral schools.

Outside of the New England States, however, the movement progressed not simply by the establishment of rival schools in competition with the older schools of the country, but by the actual invasion of the latter themselves. The oral method has penetrated into many of these schools, so that in the same school some pupils may be taught by the sign and others by the oral method. This is what is usually meant by the term "combined system," but the term is applied so vaguely that many of the schools which are classified in the "Annals" as pursuing the "combined system" do not employ the oral method at all with any of their pupils. The indefiniteness of the classification has thus rendered it extremely difficult to ascertain from the published figures the extent to which the oral method is employed in American schools for the deaf.

In 1892 the American Association to Promote the Teaching of Speech to the Deaf directed attention to the lack of statistics concerning the matter, and requested the "Annals" to publish annually the number of pupils "taught wholly by oral methods, and the number taught in part by oral methods."[1]

In response to this request the "Annals" has since given us the number taught "wholly" by oral methods;[2] but we are still in ignorance of the full extent to which the method is employed in American schools for the deaf.

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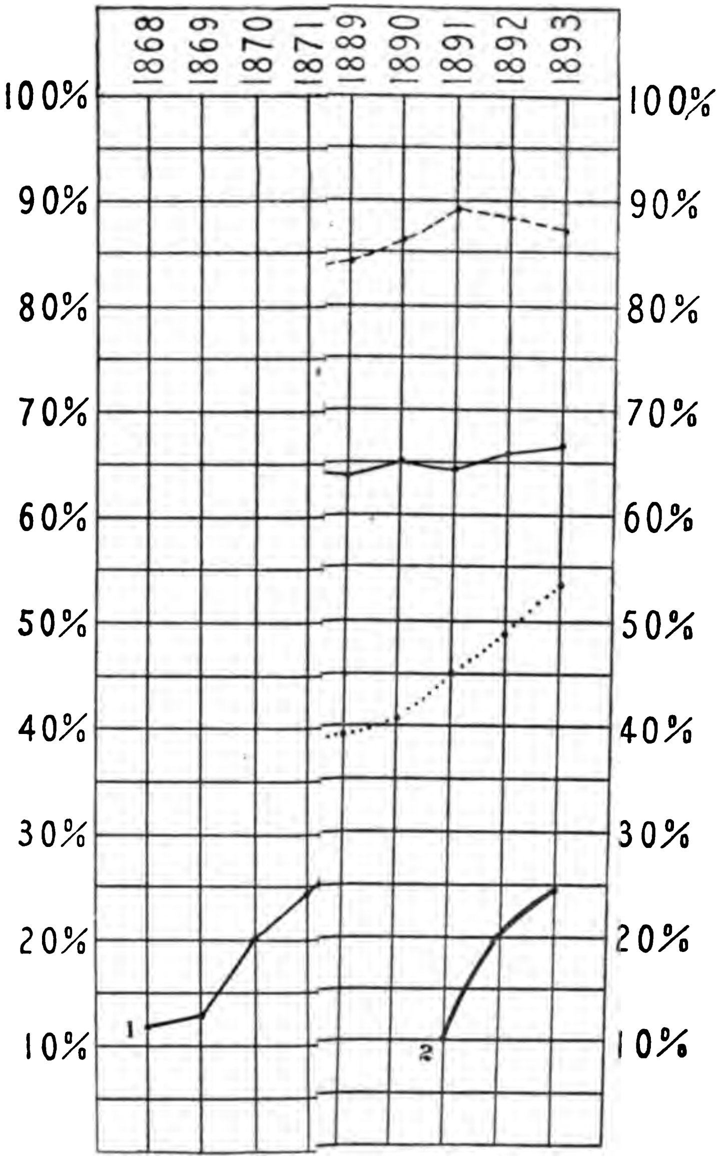
[1] "Proceedings of Second Annual Meeting, 1892," p. 139.

[2] See "Annals" for 1893, Vol. XXXVIII., pp. 52 to 62; also p. 312.

GROWTH ALLY SHOWN.



The available statistics are as follows:

II. STATISTICS OF THE UNITED STATES.

Date.	Number of Pupils.			Percentage of Pupils.	
	Total Pupils.	Taught Articulation.	Taught wholly by the Oral Method.	Taught Articulation.	Taught wholly by the Oral Method.
1884	7,482	2,041	Statistics wanting.	27.2	
1885	7,801	2,618		33.5	
1886	8,050	2,484		30.8	
1887	7,978	2,556		32.0	
1888	8,372	3,251		38.8	
1889	8,575	3,412		39.7	
1890	8,901	3,682		41.3	
1891	9,232	4,245	963 †	46.0	10.4
1892 *	7,940	3,924	1,581	49.4	19.9
1893 *	8,304	4,485	2,056	54.0	24.7

* Figures refer to number of pupils present November 15.

† Ascertained by Prof. Joseph C. Gordon. See Introduction to "Education of Deaf Children," published by the Volta Bureau.

The indications are very clear that the oral method is a growing method in the United States.

Of course we cannot tell certainly what the future may have in store, but this much is certain concerning the past: From the very first moment of its appearance in this country up to the present time the oral method has steadily gained ground, the percentage of pupils taught by it has continuously increased.

I submit, therefore, that Boston is fully justified in its adoption of that method in the Horace Mann School.

Looking back upon the past, we may note that the oral method has advanced in spite of bitter opposition from the sign teachers of the country. The advocates of the oral method have been ridiculed, their motives aspersed, their successes belittled, and their failures magnified; and yet in spite of all this the percentage of pupils taught by the oral method has continuously increased. What does this mean? Is not this continuous advance in spite of bitter opposition an evidence of intrinsic superiority? Without a struggle for existence, natural selection cannot operate to bring about the survival of the fittest. A great State institution having the whole field of a State to itself without opposition has no necessary tendency to improve: the unfit may there survive. But where you find little oral schools springing into existence through private enterprise, in competition with long-established sign schools wielding all the power and patronage of a State, and a bitter struggle going on between them, and then find as the result of the struggle that the oral schools survive, and the State institution introduces oral teaching, changing from the sign or manual method to what is called "the combined system," do we not find here an evidence of superiority on the part of the oral method, compelling advance?

If the invasion of the sign institutions by the oral method continues in the future at anything like the rate it has done in the past, it is obvious that the Oral Method will ultimately become the prevailing method in the United States. The indications of twenty-seven years of progress point in that direction, but the ultimate verdict of time has yet to be given. If we could only wait for one hundred years! If we could only wait to celebrate the centennial of this school, we would then know certainly what methods are best in the instruction of the deaf. Natural selection would have had time to do its work, and questions that perplex us to-day would then have received their final answer.

We have a long time to wait before we can examine a century of progress of the oral method in this country; but I would direct attention to the fact that both the sign and oral methods have existed for more than a century in Europe. May we not then turn hopefully to Europe for light upon the subject? What has been the result of the struggle between these methods there? And if we find that the changes here correspond to the progress made in Europe at an earlier period of time, may we not infer that the present condition of affairs in Europe is typical of the future here?

Now what are the facts so far as Europe is concerned?

The results of oral instruction in Germany early compelled universal recognition of the fact that many of the deaf could be taught to speak and understand speech by watching the mouths of others. This led the sign teachers to modify their method and combine speech-teaching with signs. Little by little the sign method pure gave place to a combined system in which, though the general education of the children was still conducted by the manual or sign-language method, speech was taught to some or all of the pupils. Thus a stage was reached in which the question of speech-teaching no longer formed the bone of contention. All teachers agreed that all of the deaf who could be taught to speak should be taught. But they differed upon the questions of signs. (This is exactly the position that has been reached to-day by American teachers of the deaf.)

Europe was divided into two opposing camps. On the one hand were the oralists, led by Germany, who urged that all of the deaf should be taught orally, without resort to the sign language or conventional signs of any sort. On the other were the advocates of a combined method, led by France, who insisted that the sign language, as well as speech, should be employed in the instruction of the deaf.

The advocates of these two opposing plans came to be known respectively as the "Purists" and "Non-purists." The "pure" oralists believed in discarding the sign language altogether; the "Non-purists" believed in a combined system in which both speech and signs should be employed.

The question in point was finally settled at an International Convention of Teachers of the Deaf which met in Milan, Italy, in September, 1880.

This convention declared by an almost unanimous vote (160 ayes to 4 noes) that the oral method ought to be preferred to that of signs, and the pure oral method to the combined system. (See Appendix A.)

The negative votes were cast by Mr. Richard Elliott, of England, and by three American delegates;[1] so that the vote was absolutely unanimous so far as continental Europe was concerned.

The following table shows the extent to which the oral method was employed on the Continent at about this time. The figures have been compiled from statistics collected by the "Annals" in 1881 and 1882.[2]

The statistics include details concerning 280 schools upon the continent of Europe, containing 15,569 pupils and 1,190 teachers.

The vast majority of these schools (81 per cent.) were pure oral schools; a small minority (4 per cent.) were sign schools; and the remainder (15 per cent.) pursued a combined system.

It is to be regretted that the "Annals" has not continued the publication of similar statistics so as to enable us to trace statistically the changes brought about by the adoption of the Milan resolutions.

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[1] "The American representatives were Dr. Peet and the Rev. Drs. Stoddard and Gallaudet, of New York, and Dr. Gallaudet and Mr. Denison, of Washington." ("Annals," 1880, Vol. XXV., p. 293.)

[2] See "Annals" for 1883, Vol. XXVIII., p. 61.

III. STATISTICS OF CONTINENTAL EUROPE (1881–1882).

Method of Instruction.	Number of			Percentage of		
	Schools.	Pupils.	Teachers.	Schools.	Pupils.	Teachers.
Oral	205	11,994	1,035	81%	80%	89%
Sign	10	629	34	4%	4%	3%
Combined ..	38	2,332	95	15%	16%	8%
Total *.	253	14,955	1,164	100%	100%	100%

* Not including 27 schools (containing 614 pupils and 26 teachers) in which the methods of instruction pursued were not reported.

The decision of the Milan Convention regarding methods of instructing the deaf has been accepted as final by all subsequent conventions of teachers that have met upon the continent of Europe;[1] and most of the sign and combined schools of the Continent have since adopted the oral method. (See Appendix B.)

The adoption of the oral method by France is especially significant. For a hundred years the sign and oral methods had been known respectively as the "French" and "German" systems of instruction. For the French to abandon their national method and adopt a system of German origin is of itself an acknowledgment of the intrinsic superiority of the oral method. The very school of the Abbé de l'Epée, where the sign method originated, is now an oral school.

It will thus be seen that natural selection, operating upon the continent of Europe for more than a century, has brought about the survival of the pure oral method and the almost total extinction of the French system of signs. The verdict of time is therefore conclusive as to the superiority of the oral over the sign method of instructing the deaf.

A few years ago (January, 1886) a commission was appointed by the British crown to examine into the whole subject of the education of the deaf, and to report their recommendations to the British Parliament. This Royal Commission gave to the subject the most thorough and searching examination that the world has ever seen.

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[1] Bordeaux Convention, 1881; Brussels Convention, 1883 (The Third International Convention); Christiania Convention, July, 1884; Paris Convention, September, 1884; Berlin Convention, September, 1884; Paris Convention, August, 1885; Vienna Convention, April, 1892; Nagold Convention, May, 1892; Genoa Convention, September, 1892. (See Proceedings of these conventions; also "Notes and Observations upon the Education of the Deaf," by Prof. Joseph C. Gordon, published by the Volta Bureau, pp. xxxvi and xxxvii; also "American Annals of the Deaf," 1882, p. 129; 1884, p. 143; 1885, pp. 78, 175, 229; 1886, p. 77; 1893, pp. 86 to 91, and p. 243.)

Prof. Joseph C. Gordon, in his Introduction to "Education of Deaf Children" (published by the Volta Bureau), says:

"This Commission endeavored to examine the whole field of deaf-mute instruction with characteristic British thoroughness and energy. Schools upon the Continent were visited, and in London the Commissioners held one hundred and sixteen sittings, calling before them for examination forty-three persons as experts specially interested in the welfare of the deaf, and deemed capable of giving information of great value upon the subjects of inquiry."

The complete report of the Commission forms a great work of 1,574 pages, which was presented to the British Parliament in 1889. As a result of their labors they recommended "that every child who is deaf should have full opportunity of being educated on the pure oral system." (See Appendix C.)

Shortly after the Milan Convention (September, 1880) the "Annals" (in 1881) collected statistics concerning the methods of instruction employed in the schools for the deaf throughout the world. (See "Tabular Statement of the Institutions for the Deaf and Dumb of the World," "Annals," 1882, Vol. XXVII., pp. 32–53.) Much of the material relating to foreign schools had been obtained through the department of State and our diplomatic representatives abroad; and the published tables were then sent to the foreign schools themselves for verification and revision. The revised summary of results was published in the "Annals" for January, 1883, Vol. XXVIII., p. 61. (See Appendix D.) The statistics include details concerning 399 schools, containing 26,473 pupils and 2,029 teachers. From the published table it appears that at this time (1882) the majority of the schools of the world (66 per cent.) were pure oral schools; a small minority (9 per cent.) were sign schools; and the remainder (25 per cent.) pursued a combined system. These are the latest available figures, as the "Annals" did not continue to publish similar statistics after January, 1883.

The following table gives a synopsis of the results:

IV. STATISTICS OF THE WORLD (1882).

Method of Instruction.	Number of			Percentage of		
	Schools.	Pupils.	Teachers.	Schools.	Pupils.	Teachers.
Oral	239	13,246	1,182	66%	52%	60%
Sign	32	1,642	130	9%	6%	7%
Combined ..	91	10,566	654	25%	42%	33%
Total*......	362	25,454	1,966	100%	100%	100%

* Not including 37 schools (containing 1,019 pupils and 63 teachers) in which the methods of instruction pursued were not reported.

In consideration of all these facts it is obvious that Boston is fully justified in pursuing the oral method in the Horace Mann School. It is to-day the prevalent method in Europe and in the world at large; and though only a minority of our pupils are yet taught by it, it is a growing method in the United States, and undoubtedly destined to much greater expansion in the near future.

The diversity of methods at present existing in the United States is eminently favorable to improvements in the art of instructing the deaf.

The "auricular" and "manual-alphabet" methods, like the "oral," seem to be growing methods in this country; but they are of too recent origin for us to tell much about them; and the statistics concerning their growth are too meagre as yet to be made the basis of research. The manual-alphabet method especially has made great progress of recent years. Personal observation convinces me that manual spelling is rapidly displacing the French sign-language wherever oral teaching has not prevailed, but statistics are wanting by which to measure the change. All of these methods (the oral, the auricular, and the manual-alphabet methods) are progressing at the expense of the sign method, which, though still extensively employed in the United States, is everywhere upon the wane. For the present, at least, the contest remains in America as it always has been in the past, — a struggle mainly between the sign and oral methods of instructing the deaf.

In Germany the controversies in which we are engaged are things of the past that have long been settled. For many years all the schools of Germany have been pure oral schools; the controversies there have taken a new form, — a form which touches the Horace Mann School. It is a question as to the character of school — whether of the institutional or the day-school form. The institutions or boarding-schools of Germany have been gradually changing, little by little, into day-schools, until now the majority are day-schools. (See Appendix E.) Most are exclusively day-schools (*external*), a minority are boarding-schools (*internat*), and a new class of school (*internat-external*) that has no existence at all in our country, so far as I know, has grown up from the conflict between the *external* and the *internat*.[1] The defendants of the day-school assert that the home relations of the children are unbroken, that the influence of the parents in instructing the children at home is of enormous consequence, that the use of speech in communication with friends and relatives at home is a stimulus to speech; while the advocates of the boarding-school think that the teachers can do better work if they have the pupils all the time under their control. In the mixed school (*internat-external*), the pupils board in the school for the first two or three years of their school life, and then, as they grow up, and are able, to some extent, to communicate with hearing persons, they are boarded out in families, under the idea that practice in speaking with hearing persons is of advantage to them. The idea seems to be that as these children are to be fitted to live in a world of hearing people and communicate with them, as their education progresses and they become more able to communicate with hearing people they should be thrown into communication with hearing people more and more as time advances, and not simply be plunged into a hearing world at the end of their school career, without any preparation in regard to what communication with hearing people means.

I venture to predict that the same course that has gone on in Germany will go on here, and that the oral day-school for the deaf, which is today in the minority in America, will in the future represent the majority of our schools. All honor to the noble women who have been working so faithfully and so long in the interests of the deaf children of Boston.

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[1] In Germany as a whole 51.6 per cent. are day-schools, 35.8 per cent. are boarding-schools, and 12.6 per cent. are mixed schools. In Prussia 70 per cent. are day-schools, 13 per cent. boarding-schools, and 17 per cent. mixed. (See Appendix E, also report from Germany in Appendix B.)

APPENDIX A.

THE MILAN CONVENTION (September, 1880).

Some months in advance of the meeting, public notice was given of the questions and subjects that would be discussed by the Convention, in a letter of invitation addressed to "The Teachers and Friends of the Deaf and Dumb" in all parts of the world. The following were two of the topics proposed:

1. Point out the advantages of the method of articulation over that of signs, and the reverse. (This should be considered principally with a view to instruction, without neglecting that which concerns social life.)

2. Explain in what the *pure oral* method consists, showing the difference between this method and that called *combined*. ("Annals," April, 1880, Vol. XXV., p. 156.)

The formal answer of the Convention to these questions was as follows:

1. This Convention, considering the incontestable superiority of speech over signs in restoring the deaf-mute to society and in giving him a more perfect knowledge of language, declares that the oral method ought to be preferred to that of signs for the education and instruction of the deaf and dumb.

2. This Convention, considering that the simultaneous use of speech and signs has the disadvantage of injuring speech, lip-reading, and precision of ideas, declares that the pure oral method ought to be preferred. ("Annals," 1881, Vol. XXVI., p. 64.)

APPENDIX B.

REPORTS FROM ABROAD (1893–4)

Presented to the American Association to Promote the Teaching of Speech to the Deaf, by the Hon. John Hitz, Superintendent of the Volta Bureau (see "Proceedings of Fourth Summer Meeting," Chautauqua, N.Y., July, 1894). The following are quotations from some of these reports:

ITALY: "The oral method generally prevails, the manual only in exceptional instances in certain schools for the deaf. It is noticeable that instructors for the manual method are no longer being trained.

"G. FERRERI,
"*V. Direttore del. R. Istituto Pendola pei Sordomuti, Siena.*"

FRANCE: "Public instruction of the deaf was inaugurated in France by the Abbé l'Epée in 1760, the sign language being used at first. Bebian simplified the methods employed, and Valade-Gabel modified, perfected, and rendered more permanent the system of instruction. Up to 1879 the sign language, writing, and articulation were used in various ways in the instruction of the deaf in France.

"Inspector-General Claveau introduced the oral method into the National Institute for Deaf-Mutes in Bordeaux, and into the National School for Deaf-Mutes in Paris; and, finally, after the congress held in Milan in 1880, most of the French schools adopted the pure oral method, excluding the sign language altogether. Since then all new pupils, entering schools where the deaf are taught, receive instruction in lip-reading and articulation. In 1885 a national congress brought together in Paris the French instructors interested in this subject, and they discussed the results obtained and the efforts to be made for the future. Since the adoption of the oral method, all efforts have been mainly directed towards adapting this method to whatever may present itself in the line of instruction, rather than any endeavor to inaugurate new methods; moreover, its general use has been effected.

. . . .

"Of 70 schools with 400 teachers and 3,790 pupils (a few small institutions excepted), nearly all use the oral method.

"(Signed) A. Belanger,
"*Prof. and Libr. at the National Institute in Paris.*"

Germany: "Germany at present has 95 schools and educational institutions for the deaf. Of these, 48 are day-schools (externate), 34 are boarding-schools (internate), and 13 are partly day and partly boarding schools (inter-externate). Total number of pupils, 6,400, of which 3,614 are boys and 2,786 are girls, under a corps of 650 teachers, of which number 64 are ladies.

"In Northern Germany it appears day-schools are more numerous, whereas in Southern and Western Germany boarding-schools outnumber day-schools. This difference is to be accounted for by the religious predilections of the two sections; Protestants being in the majority in Northern Germany, whilst in Southern and Western Germany the population is prevailingly Catholic. The mixed, or day and boarding, school is an institution of recent date. During the first few years of their attendance, the pupils of these schools are furnished with board and lodging in the school buildings, approximating family life as nearly as possible. Their young lives run here their daily course; they are here trained under the supervision, discipline, and linguistic instructions of accomplished teachers of the deaf from early morning till late at night. It is here that war is successfully waged against signs, and it is here that they are rendered capable of freely conversing by speech during the remainder of their attendance at school, in which, after the first few years, they become day scholars. This arrangement embodies all desired advantages, and, it would seem, is certainly the school system of the future.

" . . . In recent years an embittered contest has been waged in Germany among instructors of the deaf and certain adult deaf as to the greater or less adaptability of the oral or the sign-language methods. Fortunately this contest, in the interest of the instructors of the deaf and of deaf-mute instruction generally, has waned and lessened in acrimony and fanaticism.

The question is being discussed and considered more calmly and practically, devoid of personal predilections. In some of the larger German institutions for the deaf, pupils have already been classified and separated, a lower standard being exacted for the requirements of intellectually less favored, for instance, in Schleswig, Ratibon, etc. On the other hand, the agitation against the exclusive employment of the oral method, and in favor of the partial use of gestures and writing in the instruction of the deaf (as, for instance, has been introduced into Denmark), in Germany, so far, has nowhere resulted in practical application, although many a pen and much printer's ink has been employed in effecting it. F. W. REUSCHERT,

"*Principal of the Strassburg-Neudorf School for the Deaf.*"

GREAT BRITAIN: "As regards methods, the pure oral method is making sure progress. Articulation has already found its entrance into schools where hitherto it has been excluded, and although 'speech' may not as yet be used as the exclusive means of conveying instruction, the rising generation of teachers will undoubtedly get a more thorough knowledge and appreciation of the pure oral system, and will contribute toward its general adoption.

"WILLIAM VAN PRAAGH,

"*Director, Training College for Teachers of the Deaf,*

"*11 Fitzroy sq., London.*"

DENMARK: "All children of school age are received at the oral institution at Fredericia (Jutland), and while the children not totally deaf or having some little speech are immediately transferred to the oral school at Nyborg (Funen), and the feeble-minded to a separate institution at Copenhagen, the remainder are retained at Fredericia, and about one-third of them, after a trial lasting one year, are transferred to the old royal institution at Copenhagen, a manual school. The children not transferred are at the Fredericia institution formed into two divisions, A (the bright children) and B (the children of average intellect), both taught by the oral method.

"During the year 1893 a sharp controversy took place between the manual school of Copenhagen on the one side and the schools of Fredericia and Nyborg on the other. The last-named schools wished to limit still more the number of children not taught by speech, while the first-named asserted that the oral method had been allowed to extend further than advisable under a school organization like that of Denmark. This dispute has caused the founding of an association headed by the principals of Fredericia and Nyborg, aiming to withhold the orally taught deaf from the influence exercised over the graduating pupils by the numerous circle of sign-taught deaf in the Danish metropolis, who have an association of their own. The oral association now edit a periodical named the '*Effata*,' in order to propagate their views, while the association of the deaf at Copenhagen have for several years had a representative in the press named '*Smaablade for dovstumme.*'"

NORWAY: "A plan of organization was adopted in 1890, according to which all deaf children were to be received into three schools, one at Christiania, one at Trondhjem, and one at Bergen; the last named taking in pupils bi-annually, while the intellectually weak children, after a trial of one year at the original schools, are transferred to a separate — also oral — school at Hamar."

SWEDEN: "While the divergencies of opinions as to methods in cases where the manual method formerly was the preponderating one in schools were adjusted by a compromise, giving the oral-method schools two-thirds of the children and the manual-method schools one-third, — viz., the intellectually weak children, — it appears that the authorities in the places where they are at liberty to do as they please are inclined to try the application of the oral method in the instruction of all children."

FINLAND: "The Grand Duke of Finland, Emperor Alexander III., issued, July 30, 1892, an ordinance relating to the education of the deaf and blind. Among other enactments the following may be noticed:

"'In the cities of Knopio and Aabo shall be established oral schools adapted to receive eighty-five or ninety pupils each; the *instruction is to be given in the Finnish language.*

"'In the city of Borgaa shall be established a school adapted to receive forty-five or fifty pupils; the *instruction is to be given in the Swedish language.*

"'The Finnish schools at Knopio and Aabo shall, after one year's trial, transfer those children who cannot profit by the oral method to the manual school at St. Michel.

"'The Swedish school at Borgaa shall, in the like manner, transfer part of its pupils to a school at Jakobstad.

"'In order to educate pupils too old to be received in ordinary schools, a Finnish school shall temporarily be established at Jyvoskylo and a Swedish one in connection with the manual school at Jakobstad.'

"The instruction in all of the schools is given gratuitously. The parents or guardians of the children have only to pay the costs of boarding. The oral schools are all to be both *internats* and *externats*, the children being boarded in the schools the *first* two years of their instruction, and boarded out in town the six last years.

. . . .

"The advent of the new organization marks a significant progress of the oral method, as the manual method until then was the ruling one in Finland, and the oral method for many years was only employed at the institution at Knopio (established 1874). The new Inspector, Mr. Valter Forsius, has largely contributed to this result. LARS M. HAVSTAD."

AUSTRALIA: "In 1883 only about 12 per cent. of the deaf-mutes of Australian institutions were educated by the oral method, while in 1893 53 per cent. were instructed orally. SAMUEL JOHNSON,

"*Superintendent South Australian Institution.*"

Mr. Johnson's report includes detailed information concerning the schools of Australia. The following table has been compiled from his figures:

STATISTICS OF AUSTRALIA (1893).

NAME OF SCHOOL.	Total Number of Pupils.	NUMBER OF PUPILS TAUGHT BY THE	
		Oral Method.	Manual Method.
1. New South Wales Institution..	61	35	26
2. Victoria Institution...........	58	23	35
3. South Australia Institution....	40	30	10
4. Queensland Institution........	7	..	7
Total	166	88	78

APPENDIX C.

THE ROYAL COMMISSION OF GREAT BRITAIN.

A summary of recommendations extracted from the official report of the Royal Commission may be found in an Appendix to "Education of Deaf Children," published by the Volta Bureau, p. 254; see also "Annals" 1889, Vol. XXXIV., pp. 300-307.

The ninth and tenth recommendations relate to methods of instructing the deaf, and read as follows:

"We recommend: . . .

"9. That every child who is deaf should have full opportunity of being educated on the pure oral system. In all schools which receive government grants, whether conducted on the oral, sign and manual, or combined system, all children should be, for the first year at least, instructed on the oral system, and after the first year they should be taught to speak and lip-read on the pure oral system, unless they are physically or mentally disqualified, in which case, with the consent of the parents, they should be either removed from the oral department of the school, or taught elsewhere on the sign and manual system in schools recognized by the Education Department. The parent shall, as far as practicable, have the liberty of selecting the school to which his child should be sent.

"10. That children who have partial hearing or remains of speech should in all cases be educated on the pure oral system. The children should in all schools be classified according to their ability."

APPENDIX D.

TABULAR STATEMENT OF THE INSTITUTIONS FOR THE DEAF AND DUMB OF THE WORLD.

From the "Annals" for January, 1883, Vol. XXVIII., p. 61.

COUNTRY.	No. of Institutions.	No. of Pupils.			No. of Teachers.	Methods of Instruction.											
						Manual.			Oral.			Combined.			Not Reported.		
		Total.	Male.	Female.		No. of Institutions.	No. of Pupils.	No. of Teachers.	No. of Institutions.	No. of Pupils.	No. of Teachers.	No. of Institutions.	No. of Pupils.	No. of Teachers.	No. of Institutions.	No. of Pupils.	No. of Teachers.
Australia	3	147	82	65	11	1	14	2	..	..	..	..	..	..	2	133	9
Austria-Hungary	17	1,147	656	454	64	..	..	..	17	1,147	64	..	..	..	..	..	..
Belgium	10	864	482	382	..	..	..	..	5	339	..	5	525	..	..	..	..
Brazil	1	32	32	..	3	..	..	..	..	..	..	..	..	..	1	32	3
Canada	7	803	397	406	84	1	..	..	1	150	27	5	653	57	..	..	..
Denmark	4	326	150	176	41	1	142	15	2	150	23	..	..	..	1	34	3
France	67	3,482	..	..	..	4	254	..	28	1,962	..	17	871	..	18	395	..
Germany	90	5,608	1,042	908	580	..	..	..	90	5,608	580	..	..	..	..	..	..
Great Britain and Ireland	48	2,650	1,413	1,237	244	8	558	54	20	496	56	13	1,356	109	7	240	25
Italy	35	1,491	815	676	237	..	..	..	34	1,405	227	1	86	10	..	..	..
Japan	2	65	37	28	7	2	65	7	..	..	..	..	..	..	..	..	..
Luxembourg	1	29	15	14	3	..	..	..	1	29	3	..	..	..	..	..	..
Mexico	2	30	23	7	7	2	30	7	..	..	..	..	..	..	..	..	..
Netherlands	3	465	256	209	40	..	..	..	3	465	40	..	..	..	..	..	..
New Zealand	1	22	13	9	2	..	..	..	1	22	2	..	..	..	..	..	..
Norway	7	283	155	128	34	..	..	..	6	224	23	1	59	11	..	..	..
Portugal	1	8	7	1	1	..	..	..	..	..	..	..	..	..	1	8	1
Russia, including Courland and Finland,	10	584	363	221	59	3	122	10	5	217	26	2	245	23	..	..	..
Spain	7	222	125	97	16	..	..	..	..	..	..	7	222	16	..	..	..
Sweden	17	680	421	259	76	2	111	9	3	68	10	5	324	35	7	177	22
Switzerland	11	380	182	198	39	..	..	..	11	380	39	..	..	..	..	..	..
United States	55	7,155	4,085	3,070	481	8	346	26	12	584	62	35	6,225	393	..	..	..
Total	399	26,473	[1] 10,751	[1] 8,545	2,029	32	1,642	130	239	13,246	1,182	91	10,566	654	37	1,019	63

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[1] The reports from France and Prussia do not indicate the sex of the pupils.

APPENDIX E.

DAY-SCHOOLS SUPERSEDING BOARDING-SCHOOLS IN GERMANY.

In 1891 the Hon. John Hitz, Superintendent of the Volta Bureau, directed the attention of the American Association to Promote the Teaching of Speech to the Deaf to the following extract from the "Journal of the Royal Prussian Statistical Bureau for 1883," p. 217 (see "Proceedings of First Summer Meeting, 1891," p. 344):

"Taking into special consideration the deaf-mute institutions, we observe in later years a change taking place in their character; that is, boarding-schools are changing more and more into day-schools.

"The reasons which underlie this change are ascribed by experts to the following causes:

"1. The day-school affords to the pupils the beneficial change between school and home, and thereby increases, through intercourse with the world, his power of observation.

"2. Pupils can receive more individual attention than is possible in the boarding-school.

"3. The intercourse of pupils with different people promotes more especially lip-reading, and also, in general, speech, whereas the latter out of school hours is in danger of being dropped in the boarding-school and supplemented by gestures.

"4. Epidemics, which on divers occasions have been the means of greatly crippling the school work of the boarding-school, cannot so detrimentally affect the day-schools.

"5. The conditions which in general the day-school presents are more in harmony with those of the parental homes, and are therefore more agreeable to the child's feelings, because in the day-school the spirit and order of family life are, as it were, continued to the child at school.

"6. The responsible labor of domestic training and home instruction of the boarding-school falls to the lot of the teachers principally, who in consequence thereof prematurely succumb, whereas the day-school divides these labors and cares and gives better promise of success."

At the same meeting of the speech association (see "Proceedings of First Summer Meeting," p. 342) Mr. Hitz presented the following table of statistics concerning German schools for the deaf, extracted from the "Organ" for 1890:

This shows the extent to which day-schools have superseded institutions in Germany up to nearly the present time.

STATISTICS OF GERMANY.

From the "Organ" for 1890.

SCHOOLS.	Total Schools.	Boarding-schools.	Day-schools.	Mixed.	Total Pupils.	Boys.	Girls.	Male Teachers.	Female Teachers.	Classes.
Prussia......	47	6	33	8	4,083	2,336	1,747	382	24	375
Bavaria. ...	15	12	3	....	596	302	294	36	14	59
Wurtemburg.	8	5	2	1	352	161	191	27	10	40
Saxony......	3	2	....	1	390	219	171	41	...	36
Hesse.......	2	....	2	....	115	69	46	14	...	12
Baden.......	3	3	....	....	124	119	95	23	1	20
Els'ce-Loth'gen	4	4	....	....	178	91	87	12	13	21
Remainder of States.....	13	2	9	2	442	263	179	43	2	48
Total......	95	34	49	12	6,370	3,560	2,810	578	64	611

Mr. Reuschert, in his report from Germany, quoted in Appendix B, describes the nature of the mixed school (*inter-externat*), and speaks of it as "the school system of the future."

STANFORD JR. UNIVERSITY

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Education of Feeble-Minded Children in California.

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I. HISTORICAL DEVELOPMENT.

Mrs. Robert Bentley took the initiative in the formation of an institution for feeble-minded children in California as early as 1878, although an organization was not effected until 1883. Meanwhile she visited the New York institution, and subsequently elicited the interest and coöperation of Mrs. H. R. Judah, now of the Bishop Armitage Church Orphanage at San Mateo, Dr. W. P. Gibbons, of Alameda, Principal Warring Wilkinson, of the Institution for the Deaf and Blind, and Dr. J. H. Wythe, of the Cooper Medical College. An appeal was issued through the public press, letters to physicians, the clergy, and by more than one hundred personal calls made by Mrs. Judah, Mrs. Bently, and others, for a meeting to be held at the Palace Hotel, San Francisco, July 24, 1883. Over 200 persons responded to the call. Bishop Kip, Rabbi Elkan Cohn, Dr. Robert Mackenzie, Dr. E. T. Wilkins, Mrs. Sarah B. Cooper, Dr. Warring Wilkinson and others addressed the meeting. A committee was appointed to draw up a plan of organization and report a week later. At a meeting of July 31st, the articles of incorporation were adopted and a board of directors selected of which the late Leland Stanford was chairman. By the 9th of October $8,000 had been raised. During the next few months children in the Sunday schools and public schools, as well as private individuals, added to this contribution; and on the 22nd of May the institution was opened at Vallejo. Subsequently it was removed to Alameda. In December of that year a bill was presented to the Legislature asking the State to assume control of the institution. It was passed March 18, 1885, and $25,000 appropriated for the purchase of property and $20,000 for its support during the ensuing two years. The private association was disincorporated and the institution turned over to a board of five trustees appointed by the Governor. On the 10th of

December, 1885, the institution was moved from Alameda to Santa Clara.

The Legislature of 1887 gave the institution $25,000 for building and improvements and $20,000 for the current expenses of the two years following. Before the expiration of this period, however, it was evident that the growing demands would soon render the Santa Clara property inadequate. It was accordingly decided to abandon it and seek a permanent site possessing large possibilities. The Legislature of 1889, in accordance with the wishes of the superintendent and board of trustees, appropriated $170,000 for the purchase of a property and the erection of buildings; $15,000 for furniture; $15,000 for waterworks and sewerage, and $81,000 for the maintenance of the institution for the next two years. The William McPherson Hill ranch of 1,670 acres near the village of Glen Ellen, Sonoma County, was purchased at an expenditure of $50,000. Work on the buildings began at once, and the corner stone was laid November 19, 1890. The Legislature of 1891 appropriated $85,000 for the maintenance and $125,000 for a boys' wing to the main building, engine and boiler house, and additional furnishings. Although the buildings were not completed, they had progressed sufficiently far to be occupied; and, on the 24th of September, 1892, the inmates were removed from Santa Clara to their fine new home at Glen Ellen. The Legislature of 1893 appropriated $98000 for the erection of a girls' wing of the main building and $100,000 for the maintenance of the institution for the two fiscal years following.

II. GROWTH OF THE INSTITUTION.

When the institution was turned over to the State, December 10, 1885, it numbered 20 inmates; October 1, 1886, there were 69; November 1, 1887, 83; October 1, 1888, 103; November 1, 1889, 118; June 30, 1890, 125; October 1, 1891, 150; September 15, 1892, 248; June 30, 1893, 280; at the present time (February 26), 301. During the year 1891-92, 116 were admitted to the home; 11 were discharged and 7 died. Of the 248 inmates on the 15th of September, 1892, 133 were males and 115 females.

III. HOW MANAGED.

The institution is managed by a board of five trustees appointed by the Governor to serve for terms of four years each. The direct control of the institution is entrusted to the superintendent who is also the physician-in-charge and secretary of the board of trustees. For the past eight years Dr. A. E. Osborne, a gentleman of liberal scholarship and superior training as a physician and specialist in idiocy, has, with great credit to himself and the State, been in charge of the California Home for the Care and Training of Feeble-Minded Children. Four classes of officers—orderlies, trainers, companions and patrols—complete the managerial force of the institution. The orderlies enforce the observance of standing rules and regulations, execute special orders, have charge of the children in their respective departments, and are held responsible for their personal appearance and the condition of their clothing. The trainers are of two classes—school trainers and manual trainers. The former have charge of the school-room instruction and the latter instruct in the various trades and industrial pursuits. The companions rank in importance with the trainers and combine the duties of nurse and governess. The patrols serve as night watchers.

IV. Admissions—How Made.

The Legislature of 1887 repealed all former laws pertaining to its establishment and reëstablished it upon a broader basis. This Act provides that whenever a parent or guardian or any person charged with the support of a child shall desire the same to be admitted to the California Home for the Care and Training of Feeble-Minded Children, he may petition the court or any judge in the county where he resides for an order admitting the child to the institution. It is the duty of the court or judge to inquire into the condition of the child; and, if he is between the ages of five and twenty-five, is incapable of receiving instruction in the common schools, and has been a resident of the State for one year, an order is to be issued for his admission to the home, providing it is not already full, or the funds available for its support exhausted. It is also the duty of the court or judge to inquire into the financial condition of the parent or guardian; and, if he be found able to pay in whole or part the expenses of the child, the amount which he is to pay shall be fixed. These amounts vary according to the grade of the child—from $5 a quarter to $25 a month. The great majority of the inmates, however, are free cases. Private arrangement may be made with the board of trustees for the admission of children younger or older than the above stated age by the payment of such sums as may be deemed sufficient to meet all the expenses of the child. In such cases a commitment from the court is not necessary. Children may be admitted to the institution for life.

V. INFORMATION OF CHILDREN REQUIRED.

Before a child is admitted to the home, the parent or guardian must furnish the superintendent a detailed account of the child, giving (1) Family history—nativity of child and parents, date of birth of each, number of children in the family, cause of death of parents or grandparents, amount of school instruction given the child. (2) Personal characteristics—height, weight, color of hair and eyes, irregularities in speech, features, and movements, defects of sight and hearing. (3) Capabilities—can he go up and down stairs, dress and undress himself, throw or catch a ball, tie a knot, go on errands, recognize colors, talk, read, count, write, draw, sing, imitate, handle tools, do housework? (4) Characteristics—is he excitable, nervous, gluttonous, fond of play, fond of children or fond of animals? (5) Habits—does he soil or destroy his clothing; does he injure furniture: is he dangerous with fire; does he use tobacco? (6) Moralities—is he affectionate, reclusive, truthful, trustful, frank, profane, obstinate, passionate, obedient, noisy, easily managed, religiously inclined, given to self abuse? (7) Diseases—has he ever had epilepsy, St. Vitus dance, paralysis, sore eyes, skin or scalp diseases, diseases of lungs or bowels? (8) Etiological—occupation and age of parents at the time of the birth of the child; was he born in full term; were instruments used; was there deficient animation in the child at birth; was he nourished by the mother or fed artifically; was either parent subjected to special overtax or strain of body or mind immediately prior to the conception of the child, was the mother during pregnancy subjected to any continuous anxiety, hardship, or accident; was either parent or grandparent addicted to the use of alcoholic drinks, tobacco, opium; had either parent before the birth of the child been subject to paralysis, neuralgia, epilepsy, chorea, nervousness, or eccentricity; are there cases of feeble-mindness or insanity in the family of the father or mother? In all one hundred and seventy-four questions are asked, and the family physician is requested to fill out the blank, together with the aid of competent friends or relatives.

VI. CLASSIFICATION OF CHILDREN.

The inmates of the home are roughly classified in three departments—Imbeciles, idiots, and epileptics and paralytics. To the first class belong those chiefly of arrested mental development—"a weakening resulting from an uneducated, immature mind— a wavering, a failing of the vital processes of the brain that has never known a stronger or a normal condition." This class includes the idio-imbeciles —those susceptible of training along simple, uncomplicated lines; and the higher grades of imbecility or feeble mindedness—those children capable of considerable intellectual and industrial training. The idiots, or those characterized mainly by vegetative functions. make the second class. These may have a sufficient modicum of mind to admit of imitation and possess the power of memory, but they are only in a very slight degree teachable. The epileptic, or third class, may include both imbeciles and idiots. Dr. Osborne thus characterizes this class: "The epileptic is an individual of strange characteristics, and a duality of personality which may quite outdo in viciousness and meekness, criminality and cunning, immorality and simulated innocence the Jeckyl and Hyde creation of the novelist. * * * We speak of epilepsy as a disease; rationally it is a misnomer. Many diseased states follow in the epileptic train, but the original, prime influence of this altered state of mind and body, to whose outward manifestations we give the name of epilepsy, does not arise alike in every case from any one particular organ, relates to no one particular function, limits itself to no one particular tissue, perhaps has no particular germ to call its own, and its mental and physical degradation of the afflicted scarcely ever effects any two exactly alike."

VII. Educational Features.

The educational work of the home is confined largely to the imbecile class, although many of the epileptics are capable of doing considerable intellectual work. Most of the children begin in the kindergarten. This department of the institution at Glen Ellen is under the supervision of Miss Emma Williard Peck, an efficient and sympathetic worker. Here the capabilities of the younger members of the institution are tested; exercises are given in paper cutting and folding, sticklaying, mat weaving, and work in colors. They are also taught songs and games. The superintendent notes that physical activity is especially beneficial to these children and on this account much is made of the games. As a rule the children are very fond of music and reciting. The memories of many of these children seem unusually strong.

From the kindergarten the children pass to the different educational departments, receiving instruction in the elements of arithmetic, reading and writing. The school work which was inspected by the writer some weeks since seemed most excellent, considering the size of the classes and the great number of obstacles peculiar to this class of defectives.

The speech of many of these children is markedly imperfect. In a class of 23 boys from eight to sixteen years of age, four could not speak at all, four could scarcely make themselves understood, six could speak fairly well, and but nine could speak well. This very general defect of speech combined with diseased and weakened brains makes progress in reading and language doubly slow. The school work is continued throughout the year from 9 to 11:30 A. M. and from 2 to 3:30 P. M. with evening classes for those engaged in industrial activities during the day. Much attention is given to calisthenic drills, dumb bells and wands. The cadet system of drill is adopted among the boys, for more thorough discipline and self-control. The brass band, composed of a dozen boys, and the orchestra, of as many girls, practice under a skilled leader four hours each week with astonishing results. In one instance an idiotic girl, who scarcely equals a two year old child in vocabulary and intellectual development, rivals "Blind Tom" in her musical accomplishments. Manual training enters largely into the scheme of work at the home. The boys are taught shoe-making, carpentry and farm-work, and the girls given an excellent course in domestic economy.

VIII. CAUSES OF FEEBLE-MINDEDNESS.

From the incomplete histories of children furnished him, Dr. Osborne gives the following leading causes of feeble-mindedness of the 248 inmates in the institution, September 15, 1892: Accidents and diseases of infancy, 204; causes relating to pregnancy, 18; relating to parental condition, 9; relating to brain lesions, 18. Eighty-six are reported as congenital and forty-four as caused by epilepsy. Three children had insane parents, one child had a feeble-minded father, and in two instances the parents were related. One family has furnished the home with seven inmates, the father being a drunkard and the mother feeble-minded; another family is represented by five members. In another instance a feeble-minded mother and four children to whom she has transmitted a taint of her disease, are inmates of the home.

IX. RESULTS OF TRAINING.

The feeble-minded as a class are dull in perception, with slight power of attention, uncertain memory, weak will-power, defective judgment, awkward gait, unsteady hands, defective speech, and dreamy, far away expression of the eyes. As a class they are of neurotic stock and subject to all the physical and mental suffering due to extreme nervousness. Educational work under these conditions is necessarily difficult; and yet the results of careful, sympathetic and systematic training are most satisfactory. In many instances it is not possible to outgrow or overcome the defective mental condition, but in most cases it is possible to develop their bodies, strengthen their minds, and train them to be helpful to themselves and useful to others. From Dr. Osborne's annual reports I glean the following evidences of improvement:

Matilda C. Has been an inmate of the home four months. Could speak no words when admitted. Can now say a few words and behavior in school much improved.

Lulu B. Has been in the home two years. Improves slowly.

Edna F. When admitted to the home eighteen months ago could speak but few words. Now says a great many words and seems more intelligent. Has developed a great love of dress, and notices new clothing.

Maud H. Has been in the home since its foundation, but shows little improvement. Formerly she was irritable. Has developed a fondness for dress, and she delights in red things, especially red bordered handkerchiefs.

Pearl P. When admitted to the home two years ago she was noisy, disorderly, and destructive, screaming almost constantly. Has shown most decided improvement. Is less destructive and has become quite docile in school. She sings and hums much of the time.

Earnest B. When admitted was eight and one half years old but had never spoken. Was in good health, but sensitive, diffident and easily discouraged. On examination a certain malformation of the mouth discovered. Given exercises in articulation. Made rapid improvement. Was taken from the home and placed in the public schools, where he has distinguished himself as a diligent and bright pupil. Recovered speech after training at the home for two and one half years; all evidences of feeble-mindedness removed. "The chasm of imbecility has been spanned and he has passed over to the bright land of an intellectual promise."

That this work is being most efficiently done at Glen Ellen is apparent to those who have inspected it and studied the results. After a somewhat careful study of the California Home for the Care and

Training of Feeble-Minded Children the writer is led to believe that it is one of the best managed charitable institutions in the State. Its methods are thoroughly modern and its tone and influence broadening and uplifting to the hundreds of unfortunates who constitute its membership. Dr. Osborne is sufficiently young in years to be progressive, in the best sense of that word, and sufficiently experienced in his chosen field to be a conservative and a safe leader of this great educational movement—"a link in the chain of the public schools," as Dr. Howe once said, "the last indeed, but still a necessary link in order to embrace all the children in the State."

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